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(5)

Gullion, Gordon
1949 – 1950
Fulica americana

Journal and Species Account, pt. 1
* Journal and Species Account, pt. 2
* Maps of Study Areas
* Bands, Banding and Miscellaneous tabular data
* Records of birds released from Gray Lodge and Lake Merritt
* Leg coloration
* Photographs
  developement of shield
  general

* not included in this volume

Journal and Species Account

Fulica americana

[Part 1]

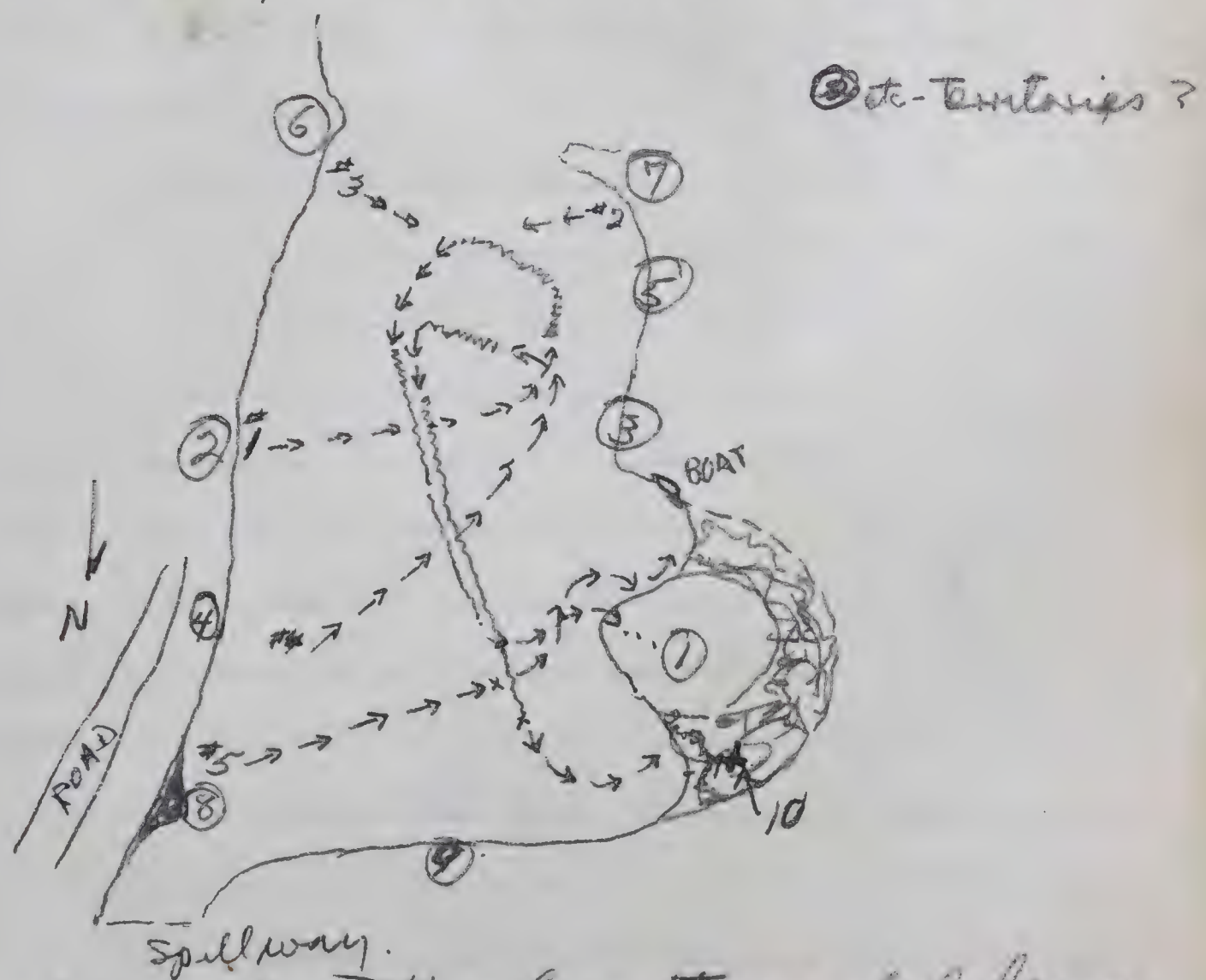
Fullion
1949

Fulica americana

Mar. 19. Gray Lodge Refuge, Butte Co, Calif - several birds disturbed this evening (5 p.m.) raised readily to 20 or 30 feet above the ground and circled around in an uneasy manner - I wonder if they are getting ready to migrate.

Mar 20. Again this morning a number of birds rose into the air, but no so many as last night. They were all on small pools in one of the burned-over, drying up areas of the refuge. Flew strongly and up to some elevation.

Mar 27 Lake Jewell, Tilden Park, ~~Contra Alameda~~ Contra Costa Co, Calif. - At least five birds on the lake today (10:15 a.m.) 1 which I drove out from the cat-tails along the east side seemed to arouse the interest of the other four. This one was attached by two but most closely pursued by a third. Pattern as follows.



As I moved south along the road I drove #4 out of position (4) which it had entered

Jullion
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Fulica americana

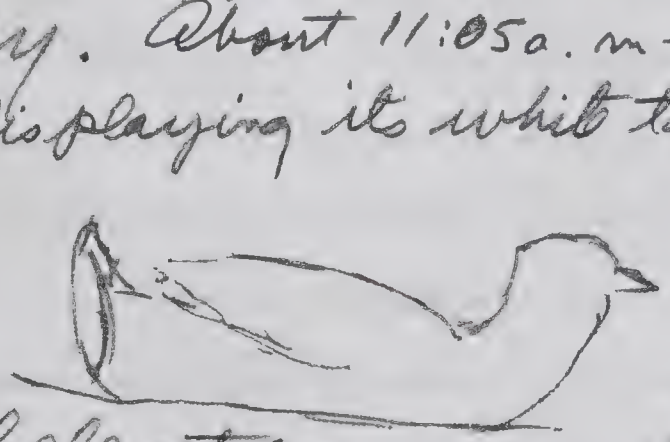
Mar 27 Lake Jewell, Tilden Park, ~~Alameda~~ Contra Costa Co, Calif. -
(Cont'd) a few moments before after giving the "haw-paw" note three or four times. #4 readily left that area as I approached ~~to~~ but with a little protesting. After investigating the spot I moved on, and #1 protestingly left the shelter of the cat-tails. As soon as #1 was about in the middle of the lake #4 made a couple of notes and started across the water with head lowered also into the water, pursuing #1. The latter turned south and quickly #2 and #3 came out from their positions, with head lowered. About then #4 started pattering over the water, #1 took flight ~~mo~~ alighting between #2 and #3, #1 then turned north, but was soon cut off by #4 who pattered over to intercept. #1 took flight again alighting and swimming over to and disappearing in the cat-tails at ①. #5 in the meantime was cutting across the lake, and #4 flying in pursuit of #1 nearly hit #5 as it came to alight. #5 moved over along the shore near position ① while #4 went to shore in the cove just to the north. - A few minutes later a coot, small like #1 went into the cat-tails at the point ② from which #1 was originally driven - - In position ③ one coot was playing with another - one mounted the other and they both went under - a moment later the smaller bottom one of the two dived twice and ~~[illegible]~~

Bullion
949

Fulica americana

Contra Costa -3-

Mar 27 Lake Jewell, Tilden Park, ~~Alameda~~ Co, Calif -
brought up ~~two~~ what looked like a
foot length of cat-tail shoot. It
dabbled around with it for a moment and
they left it - late the coot from
position (2) noisily moved out of the
cat-tails, putted around a moment
and quickly the largest of the two at
position (3) came across the pond with
its head lowered, out about ½ way
across, turned off and swam towards
the spillway. About 11:05 a.m - a single
bird was displaying its white tail patch-



with its tail elevated - quickly a
second bird responded - approaching the
first and likewise showing its tail
patch - the two birds then rotated
back and forth rump to rump - about
2 feet apart for about 30 second, then
one of them dove - the other (first) also
dove a moment late. Both brought
up the ~~bows~~ new shoots a cat-tails,
the bases of which they proceeded to
eat. - This display was in position (5).

Apr 9 - same locality - at least two pairs on the
lake this afternoon. A 213 class was
around most of the morning so several
birds may be hiding - (1 p.m.) - scattered
rolled barley around at the south end,
and on the NW island. - Also threw some
on the water - haven't seen any birds showing
interest in it - in fact the ♂ ? from

allen
1949

Fulica americana

Apr 9 Lake Jewell, Tilden Park, Contra Costa Co, Calif. - area ① swam near some floating grain then veered off as if avoiding it. ♂ entered the cat-tails at ⑥ and very quickly a pair of coots came charging across the lake - heads lowered toward my position - they then swam around nervously just out of the cat-tails, moving across to ⑦ and back again twice. Later ♂ chased a pair out of the cat-tails near the island ①. ~~One~~ The smaller left only after considerable protest. May be nesting there, but I was unable to find any sign of nesting - the larger bird joined the other near ③, soon arousing notes from a bird near ⑤. They then ~~progressed~~ swam across the lake to ⑧ where they ~~fed~~ fed for awhile. Both seemed to be diving for the white bases of the stems of young cat-tails. The smaller ♀ was diving in shallow water, barely able to get her whole body under water, and coming up tail first. The larger (♂) bird moved over to ⑨ where it dove for cat-tails for a few minutes, but then moved over towards ① where he became lost to view. For the last ½ hour the ♀ has remained feeding near ⑧, only once venturing ~~part~~ way out towards ①. Now, 1:31 p.m. - she is hesitatingly crossing to ①. (Maybe cause someone is walking along the road to the east - she went into the same area as the male - giving a single "Kruk" as she

Fullion
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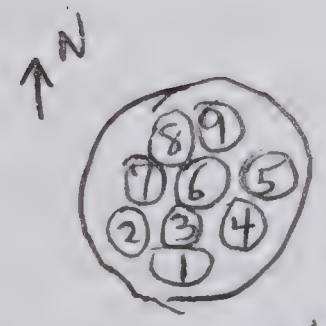
Ap 9 Lake Jewell, Tilden Park, Contra Costa Co, Calif. - vanished from view.

— definition of Terms —

- charging - means swimming across the water with head and neck lowered to water surface and making a noticeable wake in the water -
- splattering - chasing another bird across the surface of the water by flapping wings and "walking" on the water -
- spreading - refers to the extending or spreading of the ~~under tail covers~~ tail covers or crissum in courtship play.
- paired display - both bird behaving in like manner.
- churning - refers to the behavior where a bird lifts its body out of the water and churns the water by stroking the feet forward.



Nest 1 - 9 eggs - in position as indicated.
eggs about 2½ inches above water - nest inside diameter 6 inches across top of eggs.

The above described nest found in position 10. - as soon as I approached the area, I found the smaller (?) bird feeding on algae along the north side of the island -

Bullion 1949

Apr. 9 Lake Jewell, Tilden Park, Contra Costa Co, Calif.

= This bird left the area, crossing the lake to position (8) where she nervously fed. About that time the large bird came out "kronking". He remained on the scene - and steadily kronked as I searched. When I found the nest he came to within about two feet of me - vigorously protesting - the female? meanwhile remaining silent across the lake - 9 eggs in the nest - several coot, three or four quite warm (from sun?) - about 3 feet of water under nest - composed of dried cat-tails - with only a couple of green cat-tails in the vicinity - nest quite well concealed by upright dense masses of dried cat-tails. The male quieted down a few minutes after I left the vicinity of the nest. - about 2:15 p.m. one bird was loud calling "kra-kow; "kra-kow" along the E side of the lake - near position (4). A moment later - ~~the~~ a smaller bird was moving by the boat towards the island - was met at the SE corner of the island by a larger bird, who tried to mount her twice but without success - he? flew a couple of times and she moved back past the boat - he followed her as far as the boat, stopping to rest and preen on the outer side of the boat - a drake mallard was resting on the inshore gunwale - until a couple of birds came along to scare him away.

Bullion
1949

Fulica americana

Apr 9 Lake Jewell, Tilden Park, Contra Costa Co. Calif. — The male coot after being chased away from the boat by the kids, moved around to the N of the island where it went into the cat-tails ~~at the~~ and climbed up on a floating board with a turtle on the other end — neither animal seemed to make a move or be concerned about the other.

Apr 11 same locality — at 4 p.m. today — one coot, a small one, was on or very close to the nest. Wouldn't leave until I rustled the cat tails nearby — then went about four feet, very silently, and concealed itself in the cat-tails — not a sound. Stayed there for several minutes, motionless. I left before it returned to the nest. No sign of the other bird. Two birds were feeding at the position (7), in the cat-tails right near the point. The larger bird was outside the cat-tails diving and feeding on cat-tails. The smaller bird remained in the cat-tails, seemed to be feeding or working on something on the surface (perhaps nest platform building?). Once in a while one of the birds (which one?) gave a note, but generally quite.

Apr 17 same locality Nest near island, still with 9 eggs, being incubated. When first visited at about 6:15 a.m. no birds near nest, both of them being on opposite side of lake, but the second time I can near the nest, one of the birds was seen floating quietly in

Apr 17 Lake Jewell, Tilden Park, Contra Costa Co. Calif. — the cat-tails nearby — as I approached the nest this bird began to move ~~[illegible]~~ between me and the nest, actually coming towards me, giving a low "puhk — puhk" note, — the closer I approached the nest the more vigorous became the warning notes — but the coot would not come closer than about four feet. I ~~[illegible]~~ left without disturbing the nest further, and the defending bird became quiet again. Moving E along the dam, I saw another bird near the boat, the bird defending the nest came out, gave its louder call note, (which seems to be a male note) and joined the ♀ after a little fooling around. Earlier a pair (I believe this same pair) were "spreading" near position (4). At least two paired displays were made. At the southern part of the lake two other coots were found. First a small one ~~flew~~ swam out of area (6) across to (7). There it was met by a larger bird, as I moved down into the cat-tails a (6), both came across the pond in ~~threatening~~ charging pose but no notes. They came along the edge of the cat-tails but would not enter them. They are either building a nest, or have a site picked out, but I don't think they actually have a nest finished or eggs laid as yet. These birds were seen "billing" in the open water and some caressing of necks took place. (I should add that so far, all the mating or courtship displays I have seen have been on open water, but right

Apr 17 Lake Jewell, Tilden Park, Contra Costa Co, Calif.
along the edge of the cat-tails) This
south pair of coots seem equally at home
on either side of the pond, but the smaller
bird seems to spend more time in area (6)
while the larger stays near (7).
Perhaps because of the dull day (25°)
the coots are all very quiet, not
giving usual group of notes-
I'll check to see if this is correlated
with light intensity.

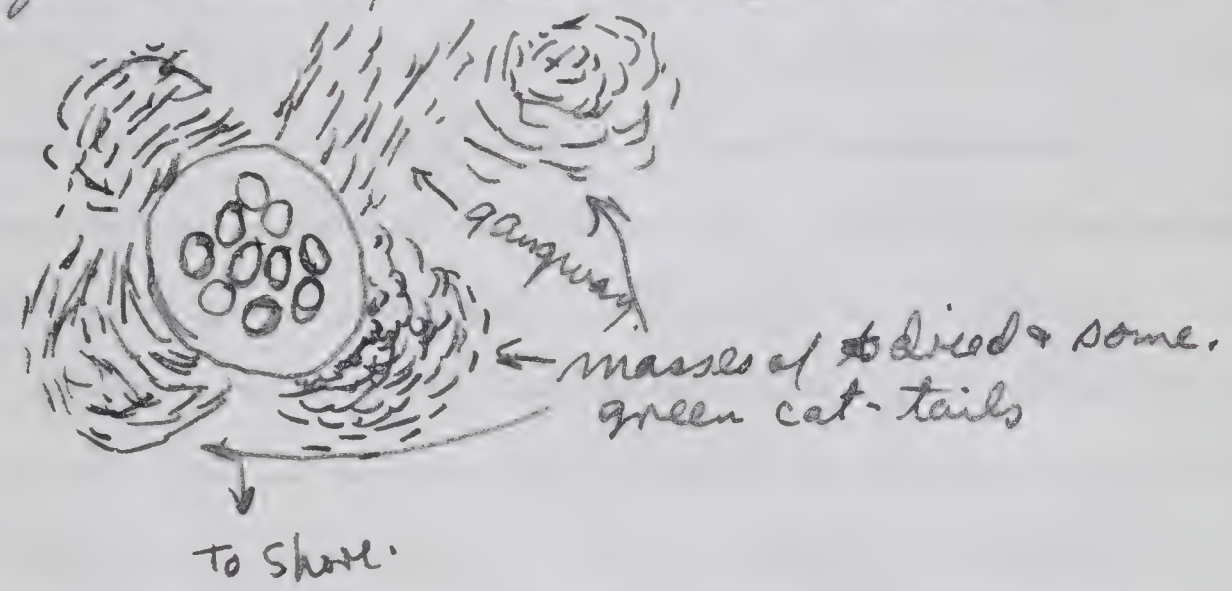
Apr 26 - same locality - 3 eggs were hatched at 9:45
a.m. the 3 young being in the nest.
They left the nest as I approached. 6
eggs still unhatched, didn't examine
to see if they were pipped or not.
One of the parent birds was in close
attendance, and "punked" at me.
At 3:15 pm. another egg was hatched. The
young was still damp, but still it crawled
out of the nest into the water. It could
not hold its head up yet so it began
drowning. I pulled it out of the water
and returned it to the nest. The one
parent was in close attendance giving
a "punk, punk, punk punk" note. When
I reached over the nest to pick up the
young this bird nearly climbed onto
my hand. (Nest, young & "punking" parent
all photographed in color). During the
height of the excitement (now 5 min after
I left the nest, one parent is giving series
of low "chook-chook-chook-chook" notes, must
calling the brood together) The other

Apr 26 Lake Jewel, Tilden Park, Contra Costa Co, Calif.
~~go~~ came into the battle, giving a hollow nasal "poonk-poonk" and while remaining hidden causing a great (now 8 min after leaving the nest I hear the "whew-ew, whew whew" of the downy young) commotion in the water, and then leading me around the wside of the island towards the boat, still staying hidden but freely giving the "poonk" note. A moment later it was on the open water near the boat, and once raised itself above the water surface, and splashed water by ~~kick~~ kicking forward. This bird with the "poonk" note I take to be the female. While I was ~~f~~ photographing the young it was answering the call of the parents with a low "whew", whew".
— The pair at the south end of the lake were busily paching nesting materials back and forth between pts (6) & (7) most of the afternoon yesterday, and one of them was paching stuff (dead cat-tails) into the cat-tails S of (7). during the foggy period this morning. — I returned to the nest site at 4 p.m. Heard a series of low "put-put, put, put, put-put"s coming from the cat-tails a few feet away from the nest. Tho I approached as silently as I could the pukking bird spied me nearly ten feet from the nest & came forward to intercept my approach. I moved under the ~~g~~ cover of gusts of wind.

April 26 Tewel Lake, Tilden Park, Contra Costa Co. Calif. - but that was not enough. While I was being ~~incl~~ intercepted the other bird moved towards deeper water, supposedly with the three swimming young. This bird still remained out of sight. Apparently one bird (the ♂?) guards the nest while the other (♀?) cares for the young. Even now as I sit ~~of~~ on the dike near the nest (4:10 p.m) the one bird is "puhk"ing in the cat-tails a few feet away while the other bird ~~is~~ is "put-put"ing ~~to~~ several ~~the~~ yards away. Now the defender has left and all is quiet except for a "poonk" and the low "whewr, whewr" of the young. I can hear at least 2 young and maybe 3, one was still in the nest when I last looked at 4 p.m.

Apr 27 - same locality - visited the nest at O26-6 (4) at 9:15 a.m. - one downy young in the nest, 4 eggs still unhatched. The "poonk" bird was in ~~a~~ area O25-8 - probably with the ~~a~~ swimming young, altho no "whewr" was heard. The "puhk" bird was near the nest, in fact I believe it was on the nest until a moment before I approached the nest. The downy young in the nest climbed out, and was well along towards drowning when I found it and replaced it in the nest. — A 9:45 I found the second nest, C12.13, it was built much as the first one was, of dead cat-tail material, with some green leaves pulled down from above, but not woven into the nest. On the west side of the

Apr. 29 Jewel Lake, Tilden Park, Contra Costa Co. Calif. - nest was a gangway, made of 3 or 4 inch pieces of ~~ca~~ dead cat-tail leaves more or less pushed together, but not giving the appearance of a solid structure.



There are 10 eggs in the nest, and the nest is 7 inches across on top of the eggs. Still room for two or three eggs. From the looks of the gangway and remembering the kind of material being carried yesterday and the day before, I believe the gangway is the last structure built. The water the nest is in is waist deep, the nest is about four feet in from the open water. As I approached the nest, one bird came out of the cat-tails from near E 4.7 and leisurely crossed to F 9.13 where it (she?) was joined by the larger bird and they both charged across the open water towards C 12, pulling up short just outside the edge of cat-tails at C-12.5 where the larger bird "churned" twice while the smaller bird sat by silently. As I ~~approached~~ located and went towards the nest I lost track of the birds, but one, I believe the larger met me near the

Apr 27 Jewel Lake, Tilden Park, Contra Costa Co., Cal'l — nest and gave the "pukk" note. When I left the cat-tails the smaller bird was feeding near. B-10.22 and later was moving ~~p~~ from F-9 towards the upper end. 1 bird crowing with a "puk-kooot, puk-kooot puk-kooot" note at G-11.3. 11:30 a.m., the bird then swam along northward. See journal p. 72 for coot chasing ♀ mallard — At about 2 pm I visited nest O-26.10 again - the fifth downy young was out of the nest and two more eggs were pipped. At 2:15 p.m. I returned and took a kodachrome of the nest & pipped eggs. - At 3:50 when I returned to nest O26.6 one of the swimming young was back in the nest. It quickly popped out as I came into view. Still just 2 eggs pipped and two yet unmarked. Eggs were so warm that I believe they are still being incubated. The "pukk" bird was on the scene, defending as usual while the other bird was in the cat-tails to the S of the nest as usual.

Ap 28 same locality - at 9:15 a.m. a bird was low on the nest at C12.13. - Visited nest O26.6 at 9:35 a.m. One dry downy young went over the side and swam away as I approached. Eggs 3 & 6 pipped, egg 1 still unmarked. The usual parent was guarding the nest, no indication as to the whereabouts of the other parent ~~or~~ brood. Now at 9:38 I hear a "chuck chuck" from near N26.5, then all is quiet. At 9:40 I started hearing

Apr 28 - Jewel Lake, Tilden Park, Contra Costa Co., Calif. - The location notes of the young. They ranged in position from M26.3 to about O25.23. The parent bird was near O26.1. The parent was giving a low "put-put", maybe calling the brood together. Their notes seemed to congregate near the parents position. After they were nearly all together, the parent gave three sharp "purk-purks", the first quieting all but one of the young and the last two quieting that young-ster. At 6:00 p.m. a coot was sitting on nest C12.13, I examined the nest, still ten eggs, the birds made no calls, but one churned close to the nest without saying anything. - At 6:10 p.m. O26.6 egg 3 was hatched, the chick was still wet but tried to leave the nest, egg 6 was still pipped but a long way from hatching, egg 1 is also pipped, just slightly. The usual bird guarded the nest. One downy young scooted away from the nest as I approached, but the other adult was not heard or seen.

Apr 28 same locality - A bird on nest C12.13 at 9:50 a.m. At 9:55 a.m both birds were silently swimming in area A9 - the smaller one in charging position but not really charging. Nest C12.13 still has 10 eggs, all slightly cool. At 10:35 a.m nest O26.6 still contained two pipped eggs. Both contain living young. After opening up a clearing to the nest the one parent seems to be afraid to go on

Apr 29 Jewel Lake, Tilden Park, Contra Costa Co., Calif.
the nest. When two vultures passed over at 11:50 a.m. the coots gave no response. At 12:40 the pair took 3 young across the open water from G30 to E28. The two birds stayed very close to the young until they were safely in the cat-tails, at which time the larger bird "billed" each of the young. The larger bird then returned to G30 to bring across 2 more young. Both swam out to meet the parent, which billed each as he came to it. Then with much "put, put" ing, they were conveyed safely across. 2 birds are missing, probably already lost. At 1 p.m. I helped egg six hatch. It came out with its eyes open, and giving the "wheur" note. The yolk sac was not completely resorbed yet, the tip of the bill is bright red, the base of it a duller, deep blood red. The skin is orange red, the feet yellow-orange, the eyes black. I am afraid that the nest is deserted from all my attention today. At 1:10 p.m. I went into the cat-tails at D27- scared out the smaller bird with the guttural voice. She had one young with her. It dove as I approached, and went by me under water. It popped up twice just exposing its head, the last time, believing all was safe came up completely, like a ball of black wool. The female all the while was giving her "poonk" and

Apr 29 Jewel Lake, Tilden Park, Contra Costa Co., Calif. -
also at a critical moment gave a low growling guttural "r-r-rrrr" sounding more like a growling dog. Apparently the larger bird was investigating the nest, for after I left he came "puhk" ing across the lake, sticking close to the cat-tails along the dam. He got about as far as L28 before he turned around and returned to the nest area. 1:15 p.m. At about 1:20 p.m. the male was with a young at N26.16. Some billing was seen, then a moment later he started out into the open water leaving the young behind. I got out of the car just in time to see him join the female who was bringing all five young across the lake. They headed four into the cat-tails at L22.24, and ~~went~~ the female went back out (10:45) to bring in a laggard at about the same place. Again the male was seen "billing" at least one and maybe more of the young. Six of the seven out of the nest are still alive, and maybe the two in the nest will make it also. Nest C12.13 warm at 6:10 p.m., bird about two feet away in cat-tails churring and giving the "puhk" note occasionally. While pulling some cat-tails out I disrupted the nest considerably, hope not fatally. Nest O26.6 contains one viable egg, still being brooded, the young I helped hatch was nowhere to be seen. I hope is okay. The whole family apparently was in the area. Egg 1, the last still only about 3 pipped.

Allen
949

Fulica americana

Apr 30 Jewel Lake, Tilden Park, Contra Costa Co, Calif-
A bird incubating at C12.13 at 11:40 a.m.
At 11:50 a.m. the last egg-1- in nest
326.6 was sorta cool but the bird
inside is still alive. It is pretty
well pipped, but I helped it along. Want
to get the color right. Very tip of bill
black, bill to nares orange-red, nares
to head, deep blood red. There are
short head-like orange structures
around the upper base of the bill
Bill comes out under right wing. The
orange structure is a club shaped affair on a
stalk on either side of the bill in
front of the eyes. The skin above the
eyes is blue. Feet are kind of a
colorless greenish, ~~body~~ dorsal body
surface covered with long black down,
½ it length orange, wings the same.
A 1 mm. claw on each alula. Wings
also with orange tipped black down.
Black down on undersurface only
slightly tipped with yellow.
Bill from nares, 5 mm.
mid-toe 25 mm. Tarsus 22 mm.
hallax 8.5 mm. tip of bill from
top of frontal shield 14.75 mm.
Frontal shield color continuous with
that around nares. Egg tooth with
white tip, above black.

No orange tipped down on top of head, starts
down on nape. In 10 minutes the

Ap. 30 Jewel Lake, Tilden Park, Contra Costa Co., Calif
yolk stalk has nearly sealed a cross. Lobes present on feet. About 15 min. later the young bird could hold its head erect. When I approached the nest the first time today the male came in first to meet me, then the female came up, in full view, the only time she has done that. When I put the young hatched bird back in the nest, only the male showed any interest, and that was very little. Don't know whether they're thru with that nest or not, suspect that they are. Trap area and nest 0.26.6 visited about 7:10 p.m. Pretty dark, about 20 minutes after sundown. Trap empty - the last hatched young was dead in its nest, didn't seem to have any of the vigor that egg 6 had when it hatched. The male parent defended the nest, but not vigorously, he came many feet to do it however. I hoped to find the whole brood on the nest, but no luck. The ~~yo~~ dead young from egg 1 is preserved in alcohol. Also the egg, after drying.

May 1 same locality - nest C12.13 had an incubating bird at 11:40 a.m. - left the nest when I moved into a better position for observation. The parents & brood from 026.6 were in that area. At least seven young were counted crossing one of the openings, and a little later another bird was seen that I believe was no. 8. The ♀ was leading the brood thru the cat-

May 1 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
tail while the ♂ defended the territory. Late the ♀ left the area, leaving the ♂ alone with the brood scattered all over the area on the north side of the island.

May 2- same locality - Only 7 eggs in nest C12.13 #4 pipped, 9 pipped, 6, 10, 2, 1, #3 well pipped. Other young heard in area 5:30 p.m. Both parents were close by, giving the same "purrk" and "peonk" as the other pair. The male churned on two occasions. - Earlier, at 4:15 p.m. - the male from the north end ~~##~~ was near. (pair from C12.13 were out in open water with 2 downy young at 5:40 p.m.) H12, when the male from C12.13 came splattering across the water, driving him north to near H15. The ♀ from C12.13 was close behind. On H15 all three birds spread their under tail coverts and both males arched wings in very high position, spreading and giving paired display. The ♀ soon left the fracas, but both ♂♂ hung around a moment. Then both preened C12♂ returned towards his area, while 026♂ moved along edge of cattails diving ~~at~~ at H17, preening again, then leading through open water towards F26, from there I lost track of him. Late, I found a fresh nest platform at 025.19. Didn't see or hear ♀ or brood from 026.6. The fresh nest platform was not defended, it was a number of green cattails broken down to it, made

Fulica
1949

May 2 Jewel Lake, Tilden Park, Contra Costa Co., Calif. — Mostly of dry cattail materials, no young way present.

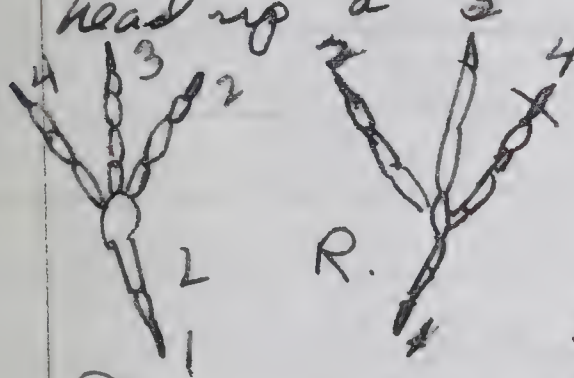
May 3 Same locality — Visited the lake today at 5:45 p.m. to weigh eggs. Eggs 3 and 9 have hatched in the meantime,

#1	not pipped and cool	wt. 28.9 gm at 5:50 p.m.
2	" " " "	wt. 26.4 gm at 6:00 "
4	still pipped	wt 28.7 gm at 5:50 "
6	not pipped - warm	wt 28.2 gm at 5:55 "
10	" " "	wt 28.1 gm at 5:55 "

One 6 hr + downy young at 6 p.m - wt 22.1 gm. This young, the 11th chick, answered and responded to the calls of its parents some 40-100 feet away. When I returned to the nest with the young another was nearly but rapidly swam away. This young first time tried to escape, the second time it did not. I have noticed this change in docilness in at least three other birds I have handled. Both parents were around the nest, both giving characteristic calls, the ♂ was churning vigorously for short periods of time. He also followed me as I left the nest to weigh the young, and stayed close to me as I returned with the chick. — I wonder how many of the missing young have drowned because they pipped over the edge of the nest while still damp and still too weak to hold their heads up. - 2 of the young have been found thusly and saved.

Fulica americana

May 5 Jewel Lake, Tilden Park, Contra Costa Co., Calif. (C 12) -
At 5:58 p.m. egg 6 when being weighed is practically hatched, will be out in a few minutes. Watched while weighing the next egg. Clipped toe nail R4. Could hold its head up a moment later, calling all the time. Weighed 25 again, shell saved.



Egg 10 pipped also. Once I pulled cat-tails away from the nest to see it better, the parents have pulled down a lot of green cat-tails around & over the nest to better conceal it. — Visited the north pair about 6:30 - when I crossed the dike the ♀ was in H 18 and the male came out of N 26 - she was quiet but he noisy. I crossed on my clearway going by the new nest, which seems to be more nearly complete, with a fairly good gangway built. While on the island the ♀ came into area K 24, busily "poonking". No sign of the brood from this area, but I haven't time to look around. The ♂ seems quite concerned about the new nest. The ♀ of the C 12 ♀ nest doesn't give a poonk like this ♀, but does give a note quite lower than her mate, and not nearly the clear punk" of the male. One of the birds (♀?) seemed to be feeding on insects on the water and on floating vegetation, moving a little

Mar 5 Jewel Lake, Tilden Park, Contra Costa Co., Calif. - like a phalarope, but not so rapidly. This north pair sure act as if they had no family duties to preform. The hooting of a pair of horned owls in the Eucalyptus groove to E seems to have no effect on the coots. 1 Coot ~~was~~ crowed twice along the E side of the lake but circumstances were not observed. - In the egg of this naturally hatched I notice that the vitelline blood vessels are not filled with blood as in the 2 I helped hatch, so they probably were not yet ready to hatch. Noted that this young today held its head erect, fairly well 2 minutes after hatching.

May 6 - same locality - visited the area with Vichi this evening. The north pair still acted as though they had no young, but we were able to count at least 3, and maybe four. Two were seen in area N26 and one at H18.23. ~~A ...~~ A bird, which Vics that a 4th young, was seen also in N26. The one at H18 dove as I approached, and tho I remained in the area for nearly a minute, I never did see it come up. The new nest (O25.19) seems finished, a good gangway on it, running from a floating 2×4 board to the nest. the ♂ was more or less defending the nest area, but not vigorously. The ♂ also seemed most concerned

May 6 Jewel Lake, Tilden Park, Contra Costa Co., Calif. about the widely scattered young, the ♀ showing no particular interest in them. I suspect more than the 3 or 4 seen are still around. They are probably scattered thru the cat-tails along the dam & around the island. — One of the coots from pair C12 was heard crowing about 6:30 pm., no circumstances were observed.

May 7 same locality Nest C12.13 is deserted with 2 cold eggs left behind, #1 & 2, 3:55 p.m. both eggs weighed. Despite the weight difference, these 2 eggs both measure 50×36 mm.. so there is no great size difference. No parents or young around this nest when I visited it. — Nest at 025.19 still without eggs. Most of the time no birds around but about 7:15 p.m. the ♂ was in the area, vigorously punking. One of the birds in area FG-9&10 - was heard crowing about 7 p.m. Heard nor saw no young today, nor did I see the S pair today, and only the male of the N pair.

May 8 same locality - Both of the deserted eggs from C12.13 broken open this morning and found to be rotten. No signs of an embryo ever having developed. One bird (the ♀?) of the south pair swimming in the open water about 7:45 a.m. between E9 & D12. Later, near the trap on the island both birds of the north pair were evident and noisy. The ♂ especially was doing

Fulton
1949

May 8 Jewel Lake, Tilden Park, Contra Costa Co. Calif.-
a good deal of fussing. He fussed when I was near the nest, and also acted as if he was concerning over the safety of some young. The intermittent heavy rain showers about 8:00 a.m. didn't seem to dampen spirits. No eggs in nest, but it sure is ready for them. — at 4:30 p.m. one of the 3 113 students told me he had seen seven young with the parents of the South nest a little earlier. The were at the S end of the upper pond. About 4:45 p.m. the north ♂ was seen feeding one of his young. A moment late a second one appeared, and then the ♀ with 2 or 3 more, all in area N26.1-5. The male was diving, bringing up cat-tail shoots, and breaking them up and feeding them to the young One of the young apparently was doing some diving of its own. - about 20 minutes later, I watched the ♀ cross from N26.1-5 to N26.17-20 with two very yellow headed young. At the same time the ♂ was feeding one very dark young, and another copper colored one at N26.102. He was diving about 3 times a minute, bringing up food, breaking it up, and offering it to the young then diving again. Often when they were on the open water, the young scooted to the shelter of cat tails while their parent was under water

ullion
1949

Fulica americana

~~Eggs~~ & Young Weights Nest C12.13 -25-

Jewel Lake, Tilden Park, Contra Costa Co., Calif

	1	2	4	6 R4	10		6 hr young				TIME
May 3	28.9	26.4	28.7	28.2 5:58	28.1		22.1				5:55 p.m.
May 5	28.6	26.2	—	27.0 hatches	27.7 P						6:00 p.m.
"	—	—	—	22.4	see page 21						6:05 p.m
May 7	28.3	26.0	— deserted, eggs cold								3:55 pm

50 × 36 mm.

These two eggs were found to be rotten, no signs of embryos

Fulica americana

Fullerton
1949

-26-

May 8 Jewel Lake, Tilden Park, Contra Costa Co. Calif. -
only to hurry out to him again when he emerged. For a couple of minutes one of the young was seen pecking at some floating cat-tail material. About 5:15 p.m. the ♂ crossed to M 26.16 followed by 2 young and met by a third. There he busily fed them some more. About this time a fifth, very yellow bird was seen preening while swimming itself about N 25.24. There may have been more in that area that I could not see. While the parents were generally quiet, the ♂ puked and while I visited the trap, and later was heard giving a low "purt-purt", which did not seem to be responded to by anything. I have still not heard any young calling recently. - About 5:30, the ♂ was in about H 7.9 with one small yellow young, diving for some thin grass like substance and feeding it to the youngster. The adult then moved into the cat-tails nearby and the young just remained on the open water for over a minute, being extremely conspicuous. Then it started moving slowly towards I 5.21 - when in the entrance to the gap, one of the parents came rapidly thru the cat-tails from about J 6.12 to the young, offering it food, diving once, then leading it deep into the cat-tails.

Fulica americana

May 9 El Cerrito, Contra Costa Co., Calif. - a single bird resting in the marsh grass at the mouth of El Cerrito Creek at high tide 7 p.m.

May 14 Jewel Lake, Tilden Park, Contra Costa Co., Calif. - About 7:45 I observed one bird feeding a small chick near C14 - the adult was diving and bringing food up. A moment later another adult with 1 chick was seen near M25 - a moment later being joined by another chick. A few moments later 5 chicks of this brood were seen together. 3 noticeably larger and darker ones were feeding on surface material and accompanied while 2 smaller and yellower birds were being fed eat-tail stem and something else from under the water. About 8 a.m. the male from the N pair moved out from M26 to L25, tipping for a filamentous substance just below the surface - then the head went up and he moved south in a direct line - rapidly - As he moved along he rose and assumed a charging position and at about F17 started splattering, finally stopping near G13. In the meantime the S pair with 6 young were diving and feeding in the open water near E11. As the male from the N pair moved down, the ♂ from the S pair charged over, and the 2 birds went into typical sparring, wings arched, as a

May 14 Jewel Lake, Tilden Park, Contra Costa Co., Calif. — paired display. Neither touched the other, nor was any sound made. They displayed for about 2 minutes before breaking off. All the time the ♀ from the north pair remained with the young, diving and generally feeding them. I might note that the young were scattered from G 11-12 to E 10-12 at one time, scattered single individuals while the ♀ fed near G 11. When the males parted, neither dove or preened, but both dabbled in the water. The N male moved back to feed along the boat and then dove to L 21 where he was joined by at least 3 young. As they moved around the E side of the island they gave the "whew" note, much as they did during time of hatching. I had not heard it for some time. No sign of the N ♀ as yet today, will have to check that "brood" nest for eggs. About 9:30 a.m. the N pair crossed from B 22 to I 20 with 3 young. The ♀ seemed to be accompanying the young, the ♂ feeding by himself in area I 21. At 12 a.m. one young was alone moving from H 4 to G 8. In area F 9 was a adult with 4 young. It chased one of the young on two occasions as they moved from these areas to C 12. A short time later one bird moved out from the E shore with 2 young, to join a pair

May 14 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
near F20 - a moment later another young was coming S along the cattails from E26. Seemed to be much larger than the 2 young feeding on the open water. On several occasions during the afternoon a single young from the S brood would be seen crossing back or forth across the open water between F10 & D11 without the company of parents. I haven't seen birds from the north brood do this. Found what apparently is another brood nest for the N pair at K28.19. The ♂ "pukked" as I worked in the area. He didn't show interest when I was around the brood nest at O25.19. but did "pukk" several times when I was in area M25.

May 21. same locality - An adult w/ 2 young seen at L5.22 at 12:15 p.m. About 12:45 p.m. the N ♀ was feeding 1 young at E18, diving for the underwater plant. A moment later another young came out of the cat-tails at H18 and proceeded to tip for its own food about 4 feet out. About the same time the N ♀ appeared near the boat with a third young, being fed. The ♂ moved over to the boat pursued by 2 young, he chased 1 of the young biting at its head, it gave a hoarse "peep-peep" as it escaped. The ♂ then promptly offered it some food just after chasing it.

Allison 1949

May 21 Jewel Lake, Tilden Park, Contra Costa Co., Calif. - The N♂ working S along H, feeding a young, is arousing the interest (12:55) of one of the S pair. A moment earlier the ♂ was in E18 area again, and met a young coming out, billing it before diving for food for it. The male moved back into his territory from H14, bringing 2 young with him. A short time later one of the S pair was in the same area w/o young. - The N♀ was in K20 with 2 young. Lots of algae on the surface of the open water there, and a snake or turtle scared the young into the cat-tails at L20.24 The ♀ moved over, billed each of the young and took off after their tormentor - she swam rapidly, in a zig-zag course, peching at the water, as if trying to catch a rapidly moving snake swimming an erratic course just under the water surface. After twenty or so feet she lost it. A short time later the ♂ moving north with 2, a 3rd from near the boat and 2 with the ♀ means 5 are in the brood - a little while later ~~the~~ one parent & all 5 young were feeding at L27 - at least 4 young diving or tipping for food - and some feeding (or robbing?) one another. Except for one small one, the N brood seems quite independent of their parents - during this same time

May 21 Jewel Lake, Tilden Park, Contra Costa Co, Calif.
The S brood with 6 young came into area H12, where the two parents were busily feeding their loosely knit flock. These young still give the "whewr" don't dive or tip, still have red bills and black throat & chest areas. The young of the north brood have lost the black throat and chest and now have a shiny white one, very conspicuous, they still give the "whewr" and their bills are still all red. The parent birds all seem to be quiet, and very busy. At 3:45 p.m. the north brood and parents were in E26, where most of the brood was diving, tho the young seem to have some difficulty diving, having to jump out of the water to get down, one of them stayed under water for about 15 seconds. Generally they go down and pop right back up. - At 4:20 p.m. I saw the north parents with six young, all white throated and about the same size. S were with the ♀ at K24 and one with the ♂ at H24.

May 28 same locality - Arrived at the lake at 7:45 a.m. All 4 adults present, and 5 young seen in both broods. At 8:05 a.m. the two males were in paired display at F14. They were ~~at~~ less than a foot apart and revolving around each other. This continued for nearly 1 minute. The north ♀ drifted down to join ~~the~~ her mate, also going into

Fulica Americana

May 28 Jewel Lake, Tilden Park, Contra Costa Co. Calif.-
~~Found~~ display. The south male started to move off only to be closely pursued by both of the north birds. I missed a moment, and in that time apparently the north ♀ turned off moving W to the cat-tails and the south male turned on the north male, chasing him over the water for about thirty feet. They settled down in paired display again. Each threatening the other and the north female came in to rejoin her male. At that moment one of the young of the S. brood came into the area, giving a "velvet" note. This young was promptly attacked by the north ♀. It dived as she came upon it, and at the same instance the S ♀ came splattering to her young's aid. The N ♀ dived at the onslaught of the S ♀ and escaped under water. All four birds then went into paired display the two ♂♂ and the two ♀♀ each opposing their like number. For a moment the 2 ♂♂ sat back on their tails to beat at each other with their feet, but this was short lived. To this the octet broke up, with each bird moving off in typical separation behavior, except that they didn't seem to be flying. During this time the broods seemed to be scattered all over the lot.

Fulica americana

May 28 Jewel Lake, Tilden Park, Contra Costa Co, Calif.-
The brood nest of the south pair was found at I 4.20. It is made of broad leaved cat-tail, all dead leaves - about 6 inches to top from water - nest oblong with gangway facing W, parallel to edge of cat-tails, about 4 feet in from edge with ~~no~~ overhead cover and ~~no~~ very few cat-tails around side. No lining. (4:30 p.m.) - 5 p.m. - the five visible young of the south brood were feeding with their parents on the open water between D11+12 + G10+11. They are quite close in pattern except that two have white on the breast that the others lack. They all seem to have white some- things projecting from the head in the way of filoplumes. No red or ~~&~~ plumage orange coloration in all white & black. ~~Bill~~ is ~~red~~ at the base and becoming lighter towards the tip. ~~Two~~ One of the young, ~~One~~ two black breasted & ~~two~~ one with the white divided by a black median band, are being fed by one (♂) parent. Twice now the male has relentlessly pursued ~~the~~ each of the two with the white, although they try to beg. The one without the white has not been molested & has been fed. They are giving a "phew-mew" note when begging, and the loose "peep" when pursued. - The young of the south brood have become very white, with the entire portion of the body white,

Fulica Americana

May 28 Jewel Lake, Contra Costa Co, Calif. — including the throat, chest & chin region, also the side of the neck and the cheeks are white. The bill is still reddish - the head has a hoary cast to it. They are mostly feeding themselves (at 5:20 the 5 male is crowing 3 times) in company with their parents, but occasionally one takes food from a parent. They look nearly as large as the female now, and sometimes when viewed from the back they are confused with the ♀. When directly facing me they look all white except for the bill which is reddish. The white is apparently only on that part of their chest region that is out of the water, for the breast of one standing out of the water breaks sharply to a light gray at the water line. Two of them are feeding on the edge of the open water along the dam. They are feeding like phalaropes, picking insects from the water surface.

June 4 same locality — This morning at 8 A.M. I have been able to count 12 young coots on the lake. 7 in the area of the south brood and 5 with the north parents. One of the south brood birds looks pretty large for his nest mates, probably belongs to the north brood, but there seems to be no objection to its remaining

June 4 Fennel Lake, Tilden Park, Contra Costa Co, Calif - and feeding with the 5 brood. The bird of the north brood seem to be fully as large as their mother tho still smaller than their father. They are extremely white on the front surfaces. Bill seems to be getting lighter but is by no means white. One of the north brood young was seen chasing dragon-flies. The insects were resting on some floating vegetation at F/9 and the young was slowly creeping up on them in a charging position - didn't seem to be having much luck. Once about @ 7:55 a.m. the ♂ closely pursued the ♀ from G/4 to G/8 - acting as if he were trying to mount her, although no display was given at any time - just as he was about to mount, each of about 5 times, she dived and came up a foot or two ahead. All the while 5 sleeping young came streaming along behind. The young of the south brood are still mostly not as white as those of the north brood. The white breast seems to be present on all of them now but only two or three have white on the head - their bills are still orangy, (at 8:150.m a churring bird heard 3 times at B/6 but circumstances not observed Redwings also excited a little)

illori
49

June 4 Jewel Lake, Tilden Park, Contra Costa Co. Calif.-
and they are all still smaller than either parent. They are still being fed by their parents, the darker birds at least, while there doesn't seem to be any parental feeding now in the north brood. Territory doesn't seem to be so strong, for the N♀ fed with 2 young at H13 for about 5 minutes with so much as a "puhk" from the south pair, tho they were all ~~here~~ in the area F11 + G12.

June 20 ~~same locality~~ - At 12:30 p.m. I was ~~alone~~ able to count 9 immature coots on the lake. From about 11:50 to 12:10 5 of the north brood were resting on a floating raft at H27.4. None of these birds have the white forparts that they had the last time I was here, rather it is all grey. Bills are dark, maybe black. Wings look well formed, & imagine they can fly. They seem to be completely independent of their parents. When the female was out feeding, two of them passed right by her, feeding on their own. One was heard giving a characteristic "wheew" while another with it gave a poorly developed "poonk". The young of the north brood seem to be quite sociable, one seldom being seen alone. Both adults of the north pair are visible, and both silent. They both seem to be

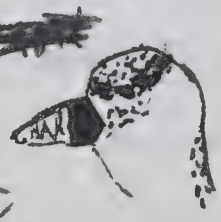
une 20 Jewel Lake, Contra Costa Co, Calif. in fine plumage, but ♂♂ appear quite greyish. Only one bird (♂?) of the south brood seen so far. It gave the crowing note at position C4 about 12:15 p.m. One once, no cause or results seen. About 12:10 a red-tailed hawk was circling over the lake. Exposed coots (about 6 of them) did not try to find shelter but rather stayed put keeping one eye turned skyward. During the time the Buteo was overhead there was no sound from the birds on the lake. — At about 1:45 p.m. 10 young were seen, 6 in the area D+E-18+19., the other four in the south pond. Two ♂♂ were in a distant paired display at C+D-17. One about C 17.23 - the other at D 17.18 - the one from C 17, splattered a few feet towards the other, but they were never closer than about 15 feet, soon they gradually dropped out of the display and went on feeding. No sounds were heard during the process. At 4:15 p.m., while mapping the lake in the vicinity of the south brood nest the ♀ worked across the open water from F9 to nea my position beside the nest. She churned about 8 times, and "pooped" between churns. The ♂ followed along about 20 feet behind, "pulking". They act as if they may be nesting again.

llion
949

Fulica americana -38-

June 20 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
A minute after the above observation I found a nest with 6 eggs in it, apparently belonging to the south pair. Since the eggs were cool when numbered I didn't hang around to measure the nest etc. The nest is at about I 5.13. It has a smaller inside diameter than most nests and seems to be deeper, it is much higher out of the water and lacks an extensive gangway. It is a very few feet from open water. There are a few breast ~~to~~ feathers among & under the eggs, but not an attempt to line the nest with feathers. - The nearby brood nest appears to be in good repair and in use. - Whited was working (about 5:30 p.m.) in the area north of the island the N♂ came over and "pukked" me vigorously. Probably another nest but I haven't time to look for it tonight. - Six young and both the north parents were on the water in area E+F-21+22 feeding about 5:35 p.m. All of the young but one were together. The parents were each singly, on either side and several feet away from the brood. The young were busily tipping and doing some diving. They all have white under tail coverts and are all nearly the size of the ♂ parent. The under tail coverts look fully adult but the rest of the plumage is not. Their bills are a light

June 20 Jewel Lake, Tilden Park, Contra Costa, Calif. - grayish when seen in good light, their breasts a dirty light gray & their backs are darker. 2 of them have very dark patches on the forebreast just above the water line. Two of the south brood are still very white on their front surfaces. The brood next of the north pair (at 025.19) is nearly gone, not being used and has nearly fallen apart, their 3rd nest this still seems to be in use tho it is nearly sunken. A fresh green leaf as been laid across the top & other dry stuff laid on top of it recently. The brood next along the dam was not visited. Three of the south brood studied more closely one has some white under tail coverts and a dark breast etc, the other two are still quite white, showed no signs of white under tail coverts.



One that I studied closely seemed to have a black bare to its bill, with the distal portion more yellowish, also the cap of its head down around the eye was darker than the back of the head, neck or breast. Something else that is noticeable, the birds of the north brood & the dark one in the south brood now carry their tails free of the water, while the white fronted ones still swim with their tail on the water surface also a definite size difference.

June 20 Jewel Lake, Tilden Park Contra Costa Co. Calif.
At 6:30 p.m. I counted 7 young in the area of the south brood and six young with one of the north parents - both south brood parents were seen in addition to the seven young, but they weren't together. At least five of the seven had white bases on the backs of the necks & head varied from the pattern shown above to one in which the whole back of the neck & top of the head is a very dark gray. The darkening apparently starts at the back of the head and moves down the midline then spreading to either side of the neck. - Just came to my attention that I haven't seen the coots flying clear of the water since March 27.

June 21 same locality - Watching the ♂ pair since 10:50 a.m. until now 11:40 a.m. - during most of this entire time both birds have been in view and thus off the nest. For the last 10 minutes only the ♂ has been in sight but I think the ♀ is off N of the South Pond. Now I hear her "pooking" & I can see the male over in the vicinity of the nest. - Shortly after I arrived this morning the ♂ was seen to chase a ♀ reducing off some low hanging dead branches at 6:11.6. he made two lunges at her - rising out of the water each time. A little while later the ♂ closely followed the ♂♀ into the opening at I-6.21. he

June 21 Jewel Lake, Tilden Park, Contra Costa Co. Calif.-
making a series of low notes resembling crowing. (Now 11:50) the ♀ has moved over to F9 and the ♂ has vanished - on the nest?) the ♀ was just seen to chase an insect into the cat-tails and jump out of the water to pick it off the leaves) They were out of sight for some time (now the ♂ is visible at G10) Thats over an hour 65 min - that the eggs have not been incubated - both birds are now in sight - the ♂ being beside the cat-tails near the nest) and then the ♀ appeared from the cat-tails some distance away. At 1:20, the ♂ made a lunge at one ~~of~~ immature at I 6.11 - the young ducked & he churned twice. Awhile later, one of the largest young venturing into the gap near the nest, was promptly chased out by the female. The young seem to be constantly hunting the surface of the Potamogeton for insects - they completely ignore the many turtles lying with their heads above water - but make repeated attempts to catch resting dragon flies - they are noisy, giving a note that is a shrill "poink" like sound - right now (12 n) one is "wheezing" but its the first live heard today. The most alive seem in the 5 brood today seems to be 5. Both parents and the young seem to be eating mostly the Potamogeton, which is so dense they nearly have to walk over it. They do not seem to be eating cat-tail

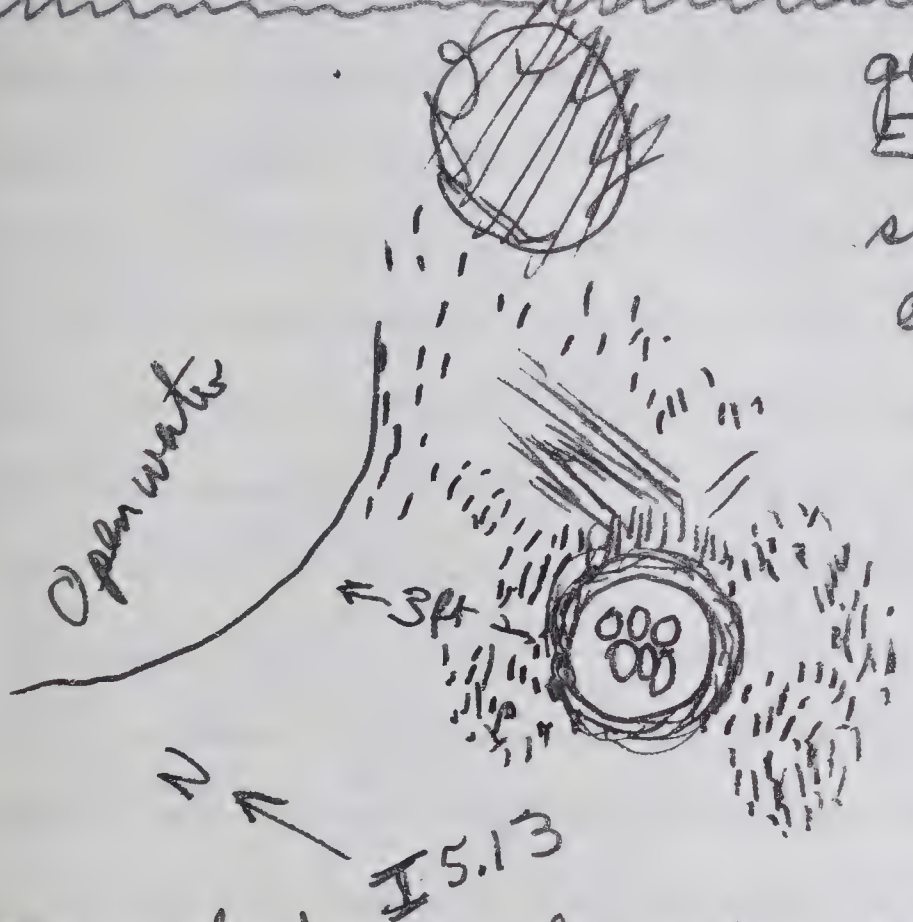
Fulica americana

June 21 Jewel Lake, Tilden Park, Contra Costa Co. Calif.-
any longer - at 12:15 p.m. the ♀ went
into the S nest. took a look around and
left, swimming down to H4 - at 12:23
the ♂ went into the nest area also
looked around, then dived, to emerge
out in the lake. Now 12:25 he has moved
to near the ♀ where they are both diving.
At 2:05 p.m. a bird crowed at J19.10-
crowed twice- almost immediately
a bird (N ♂?) came charging over from
near J23 - when at about F20. the
crowing bird splattered over to meet
him at D19 - they immediately went
into paired display and after some
preliminary fooling around they
both reared back on their tails and
lashed at each other with their feet -
they repeated this performance 3 times-
the last time with the N bird almost
on top of the south bird. About the
time the scrapping started the S ♀
"spunked" and came moving up to
bid her mate, she arrived after the
last scrap but joined him in display -
soon they broke of with dabbling
and preening. A little later one of the
S pair was busy bathing - a few minutes
later one of the S pair was perched on
a cat-tail mass near the position of
the original crow. - The nest found
yesterday was revisited today at 3:20 p.m.
Still six eggs, and very warm - inside
diameter of cup 6½ in., rim 6 in above
water, inside cup about ¼ in above water -

Allison
1949

Fulica americana

June 21 Jewel Lake, Tilden Park, Contra Costa Co, Calif. -



gangway leads out E side, turns sharply to go to open water. Gangway of fast long broad leaves - some 2 leaves of green in nest, rest are all of battered (bitten?) & narrow leaves. Seem to be quite a few feathers in this nest, not only around the eggs but also at deep layers. It is 11 in from rim of nest to water down gangway. From the rim above the gangway to the opposite side it is 12 inches. The water 1 in below the surface at the nest site was 72°F. At 4 p.m. I saw 12 young at once, six in the south area, six with the ♀ in the north area - still think my count of 13 yesterday was good. This is the first time today I've been able to count more than 10 young surely. 4:10 p.m. - found what may be the start of another nest platform for the north pair at N26.14. A little greenery in it, mostly dried cat-tails, water soaked, not over 1 inch high & about 8 inches across. I'm not sure it is fresh. The dam-wood nest of this pair is defunct. Once about 4:30, the ♀ gathered the brood close to her and then sailed into the whole lot of them, first chasing one and then

Fulica americana

June 21 Jewel Lake, Tilden Park, Contra Costa Co, Calif.- another, finally scattering the lot. This pair must have a nest active because one of them is out of site so much. I threw a tennis ball out into the lake and four members of the north brood become extremely curious, trying to determine what the floating object was. They would approach, all bunched up, to about ten feet from it and then hastily retire - 3 times I saw this happen, they never did actually examine it. The adults paid no attention to it. At 4:45 p.m. the south nest is still without a brooding bird. Can't see either of the south pair but I cleared & stuff away & can see the nest clearly. The young coots of the N brood seem very sociable and are generally closely together, except for 1 lone wolf, but the S brood is generally scattered all over their area, seldom are two even seen close together.

June 22- Mouth of Grits Creek, Alameda Co, Calif. - 3 apparently fully adult birds were in the salt grass alongside the bay here at 6 p.m. When I approached them they swam out onto the rough water.

June 23- Jewel Lake, Tilden Park, Contra Costa Co, Calif. - At 8:30 a.m. 4 young of the south brood were feeding on the south pond. A moment later the ♀ came out of the cat-tails at G4 and proceeded to feed on a patch of

Illus 49

June 23 Jewel Lake Tilden Park Contra Costa Co. Calif
open water there. She was feeding by diving, three dives were timed: 10½, 11, & 11 seconds. She did not bring the food to the surface. At about 8:50 the ♂ was heard near ⑨12 - and a moment later he was in sight - thus no bird is on the nest (deserted?). At 9:05 a.m. the two males on the lake clashed at H13.7. Sounded as tho they were lashing at each other but I did not actually see the conflict - I saw it just as it was broken off. There was no breaking off or separation procedure other than preening. The ♀ spattered from F3 to F8 in the haste to join her mate, but since the struggle quickly ended she did not go beyond G11. The nest platform at N26.14 is apparently not under construction, at least no bird was been on it since the 21st. The old egg nest of the month past seems to be in use still - today it had feathers on it that were not there before. The new ♂ nest contained six cold eggs today - it has been deserted - the clearing was apparently too much for them. At 9:50 a.m. a bird crowed at B18 - immediately the south ♀ "pointed" and the N♂ "putted". I couldn't see the proceedings immediately after the crow but a moment later I was in the cat-tails and I could see that the crowing bird was alone except for 1 young nearby.

June 23 Jewel Lake, Tilden Park, Contra Costa Co, Calif.
At 7:30 p.m. the sun had set and only one adult of the N family and both adults & 1 young of the south pair were seen - by 7:45 the N ad had dissappeared into the cat-tails at L21. A few moments later the S birds were also out of sight.

June 24 same locality - As soon as I chased them into the cat-tails this morning about 10:30, activity seemed to ease - occasionally one would be seen, but seldom for more than a moment - I had the boat off the water at 3 p.m. but it was not until 3:30 that activity started - at that time one bird crowed, and a moment later came splattering over the water from C15 to B18 - where he immediately attacked a young there. in quick succession three of the north brood were driven out to about C20. In the middle of this battle the N ♂ "pukked" from somewhere over near the island and a moment later was seen charging across the lake. The young "peeped" excitedly as he passed and he billed two of them but without slowing his pace, he continued on to about B19.16 where he drew up, matching in paired display the antics of the other bird at B19.1. This display lasted less than a minute before they broke it off and separated without

Fulica americana

June 24 Jewel Lake, Tilden Park, Contra Costa Co., Calif. - Ceremony: The N♀ followed her mate over, arriving at the nest shortly after the ♂♂ had broken off. Very quickly the N♂ left the brood to go into the cat-tails at M25.24 - I think there is a nest in that area. The S♂ moved over to rest on his favorite perch at B19.1 while the N♀ and four young fed over towards the boat.

June 26 same locality - At 9:55 a.m. one of the adults (♀?) of the S pair attacked a young of her brood at G4 - the youngster immediately dived, and the adult churred for a moment once. Another nearby young was not molested. The attacked young a few minutes before I believe it was giving a note very much like the "gobble" of the adult ♀, only a little higher pitched. - A bird in the vicinity of B18 crowed at 10 a.m. - by time I moved down there the bird had moved to B16. Throwing rocks into the cat-tails there brough forth a series of partial crows - the N♀ responded from H17 by coming out of the cat-tails and "pooking" intermittently for 5 minutes - the N♂ "pumped" a couple times from around the island but made no appearance. So far today I've seen three of the N brood and 4 of the S brood, don't know where the rest of them are.

June 26 Jewel Lake, Tilden Park, Contra Costa Co, Calif.
At 10:15 a.m. no less than 6 S brood young were seen in close company of their ♂ parent. At the same time the ♀ was resting on some debris at C 4.8 - Relocated ~~the~~ a nest seen during the night of June 23 - it is at C 12.6. It is built very much as the recently deserted S nest was, high above the water and quite deep cupped no eggs and doesn't seem to have a gangway as yet. I don't believe it is a brood nest - at least it is not like the brood nest at J 4 of this pair. Time will tell whether or not it is a new nest. - 4 dives by the S ♀ between 11:15 & 11:30 a.m. ran 13, 11, 9.5, 9.5 seconds. - on the last dive she brough up a cat-tail shoot - first one ove seen brought to the surface for quite some time. 6 ~~S~~ young of the south brood have been in view nearly continuously for the last ½ hour.

June 26 - Mouth Cl Cerrito Creek, Alameda-Contra Costa Co, Calif.
Two seen at 7:15 p.m. today feeding on the mud flats - the tide ~~has~~ is just about to reach high ~~just started out and~~ they are picking up something in the little pools left behind. They really can ~~d~~ get around on this soft mud with lobed feet. Seems to be a ♂ & ♀ together, but no young.

Million 1949

July 1 - Jewel Lake, Tilden Park, Contra Costa Co, Calif -
Watched 5 young of the N brood early this morning - all of them still have light gray heads and rather darkish bills - 2 resting on the raft have bills that are getting light - one of them has been busy trying its wings out - flapping them and dancing around. One of the N brood parents has been busy chasing young this morning - splattering after them and them churning when the young dived to escape - About 10 a.m. today I found the second nest of the N pair - at N25.24. One egg at least has already hatched and left the nest while a second young, just hatched is in the nest - this second one was photographed in B W & color - 4 more eggs, one of which (#3) was just one pipped. The male was in the vicinity pukking -. I will get other measurements on this nest at a later date - gotta get the wing trap made. About 2 p.m. the recently hatched young was out of the nest and I heard the "whewr" of two young at N25. (This nest was located by hearing the loud "whewr" notes of the just hatched young this morning). The old egg nest of the N pair is still being built up and kept under good repair - in addition the platform at N26.14 seems to have been considerably developed and looks as though it may be in use as a brood nest.

July 2. Jewel Lake, Tilden Park, Contra Costa Co. Calif.
At 7:15 p.m. #3 of the new N brood was hatched and dry. The shell was collected. #1 (34×53 mm) is pipped, #2 (35×51 mm) is also pipped, #4 (34×55 mm) is not pipped - both the pipped ones are multiply so. The N ♂ was close by "pukking". Only 5 young in the old N brood have been seen for the last two days - dont know where #6 is. These 5 young remain very close together - the N ♀ was S of the island while the ♂ was concerned over the nest.

July 3 - same locality - caught two young of N brood today - ~~toes~~ nails clipped - 1 the rt hallax, the other the left hallax ~~toes~~ clipped were R1 + L1. - egg two #2 was well pipped at 11 a.m. with the bill and much of the head readily visible - eggs #1 + #4 are both pipped about equally well - both more than doubly pipped. The ♀ seems to be maintaining close company with the swimming young while the male is partly defending the nest, chasing the older N brood and responding to the "crow" challange of the S ♂. I may be able to catch and mark one of these N parents today if I work properly. Both of the young caught today were depending upon concealment - at which they are good - rather than by diving or swimming

Allison
1949

July 3 Jewel Lake, Tilden Park, Contra Costa Co., Calif. — away to escape capture - when they are in danger ~~then~~ one of them swam under some floating cat-tail which kept it partially submerged while the other remained motionless under some root structure of some cat-tail in order to remain concealed. Both of them were absolutely silent until captured - then they loudly "whewred". - The ~~old~~ new egg nest of the S pair, at I 5.14 has been considerably built up - 3 of the 8d eggs were under water on part of the gangway, the others could not be found. - Also found another brood nest of the S pair, at C 6.16 - seems to be very much in use. - At about 3 p.m. I found the 3rd egg nest of the south pair with 4 eggs in it at F 9.24. All eggs marked on side & big end but not other measurements taken. Eggs were all quite warm, the male was over in D 11, "pukking", the ♀ could not be seen or heard. - Seem to be 6 in the north brood feeding together - still a couple of very light birds in the S brood but most of them seem to have the immature plumage now. At the moment both S parents & one young are crossing from point D 12 towards the nest area. - At 3:35 p.m. #2 of the new N brood was hatched but still slightly damp - it was busily whewring and both parents are nearly poonking & pukking - it was nail

Fulica americana

July 3 Jewel Lake, Tilden Park, Contra Costa Co. Calif. clipped - R2. A fourth, this the 3rd swimming young captured and nail clipped - L 2 - also photographed on a white paper background - the black on these animals rubs off - the parents at 4:50 p.m. are near the W end of the boat feeding one swimming young - 2 swimming young and one near the nest - and one is still in the nest after hatching.

July 4 Same locality - at 10:30 a.m. the N parents were out on the open water at L 27 with 4 swimming young. They were busily feeding them - at this same time egg #1 has the bill pretty well exposed and I suspect it will hatch by this afternoon - egg #4 is well chipped but none of the shell is missing - from the way some of these shells from freshly hatched eggs are broken up I suspect that the parent birds may eat the shell - or at least parts of it - certainly the newly hatched young don't wear the shell up so badly! the membranes are generally well intact, but great parts of the shell is missing. — Eggs of the S nest all cold - #3 weighs 29.38 gms. #4 weighs 30.13 gms, #1 weighs 31.50 gms + #2 weighs 31.76 gms - hope this nest isn't deserted. (11:00 a.m.)

July 5 same locality - At 10:15 a.m. the N parents had 3 young on the open water at L 27 feeding them some-thing

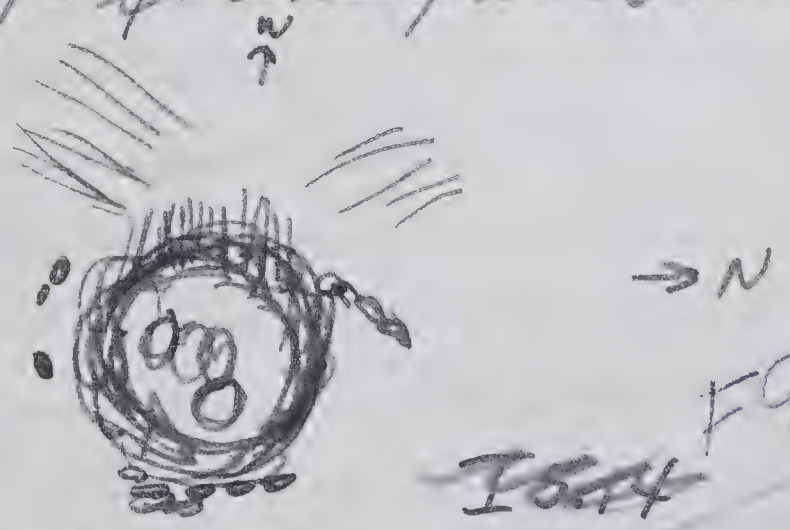
22.00
4.55
17.45

23.72
4.1
19.62

llion
249

Fulica americana

July 5 Jewel Lake, Tilden Park, Contra Costa Co, Calif.- from among the mass of Potamogeton. At 10:30 a.m. the young from egg #1 was in the nest, fully dry and ready to go. All egg shell remains were gone. It started over the side as I caught it. Toe clipped R3 and weighed, 17.45 gms. Young R2 also captured swimming away from the nest but not weighed. At 10:55 a.m. egg #4 with an active "whewring" young in it but nowheres pipped thru, weighs 24.91 gms. [illegible] still cold in the 3 egg nest at I 5.14. This nest is 6 in across the cup, which is about 2 in deep - water to rim opposite gangway is 6 in - rim to rim from gangway is 11 in. Composed of dry broad leaf cat-tail - lined with fined cat tail shreds - gangway is poorly constructed, really none, just a place for one. Nest faces W - open water being 3 ft away in that direction.



F9.24

~~I 5.14~~

No immediate overhead canopy, but the broad leaved cat-tails around the nest form an effective cover about 5 feet up, so the nest is really effectively concealed from above.

Fulica americana

July 5 Jewel Lake Tilden Park Contra Costa Co. Calif- the nest at I 5.13 is now 7 inches to the rim - a considerable amount of new material having been added - it is taking the form of an egg nest.

July 6 - same locality - Egg #4 is hatched at ~~Dam~~ 10:30 a.m. - the shell is mostly gone from the nest and the still damp chick weighs 19.62 gms. Toe nail L 3 clipped. Just after being weighed this young passed a small quantity of faecal matter - some white in it, but mostly it was a bright greenish - a long 2 or 3 inch cord about 3 mm in diameter. Caught the N brood young this afternoon, marked R a $\frac{B\,S}{S\,B}$. Both had primaries about 3/4 developed, but still with considerable sheathing for nearly 1/2 the primary length - bills gray with a reddish spot ~~of~~ on the shield. The female N was taken banded etc - her bill is like ivory - with the red shield mark - no indication of molt in primaries. - Got the N♂ to fly for a couple of hundred feet - neither of the the young seem to be able to. R 2 of the new N brood was captured at 4 18.18. - weighed ~~21~~ 25.96 gms and released - notice that all the color ~~plumes~~ are missing from the underparts and that very few are left in the ~~body~~ region except those orange and reddish ones on the head - the club-

llion
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July 6

Fulica americana

-55-

Jewel Lake, Tilden Park, Contra Costa Co, Calif.
feathers are very well developed and bright red & orange - base of bill a very deep reddish purple. About 5 p.m. caught the N ♂. - he really scrapped - the N ♀ went in the trap with him but she was released - his legs are a bright lemon yellow & green - the iris is blood red - his bill is ivory, extremely smooth - his temper is extremely vile - his bill is pied with a reddish-black marking. His shield is somewhat more extensive than the female's and is very deep blood red whereas hers is a lighter almost orange-red. - while chasing some of the N brood unmarked young 2 of them at least took flight and did so well - they are fully capable of leaving the lake I believe. When I was bringing R2 over to be weighed I saw N ♂ & N ♀ feeding at H29 with surely 4 and maybe 5 young - I'll be just a little surprized if this last hatched young L3 - survives. - just now the N ♀ is crossing to the island from the east side with 5 young - number 6, the missing one is without doubt L3 - - the tags flash in the light clear across the lake - but they flash a white rather than colored light -. Tags don't seem to bother the birds, they are shaking their heads a little occasionally, but for the most

Fulica americana

July 6 Jewel Lake Tilden Park Contra Costa Co Calif-
part they seem to completely ignore them
Oh yeah no evidence of molt on the N♂
primaries - the coverts are unmarked, same
ch color as rest of body feathers: Now
N♂ + ♀ are together with new brood at
G18.

July 7 same locality - During the noon hour
the N♂(S) and N♀(B) have been in
nearly constant view as they fed
young in the bay NW of the
Boat. I guess another bird was
lost during the night. Just now
(12:55 p.m.) something seems to be
disturbing the N♀ and she is
growling very much as she
has at me on several occasions
when I was catching young of
this brood. I haven't heard
the male give that growl -
growling is quite generally accompanied
by churning. Yesterday I found a
brood nest in the area H17 - must
check again to get exact location.
3 or 4 flying young (all of the north
brood?) seem to be confined to
an area extending across the lake
S of 18 and N of about 12 - elsewhere
on the lake they are subject to
pursuit - I have not had much
luck in getting them out of
this area. I haven't seen for
sure the two immatures banded
yesterday - since soaking my
glasses as I did while catching the

Fulica americana

July 7 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
N.I. I have had extremely limited optic powers. - At 3 p.m. I saw B/S & R near C16 - was standing at the bridge and could see R tag w/o glasses, and could see the B/S tag clearly with my out-of-line glasses. Also the N parents & brood are in area G&H-13&14. There are 5 young with the parents.

July 8 - same locality - G of the S brood examined - tip of bill to nostril dirty ivory, rest of bill soft gray, frontal shield flesh colored, iris red-brown top of head dark grey, throat light gray, 3 mm claw on each wing, some red brown feathers on rump, brown gray on back, legs gray-green, white under tail coverts present, rectrices 3/4 out of sheath, oil-gland tufted; alula, primaries & secondaries all 1/2 out of sheath. Y/P of S brood ivory on 10 mm of tip of bill, feathers on top of head 1/2 dark & light gray feathers, underparts of head, chin, throat etc very light gray, nearly white, shield flesh colored, iris greyish around edge, red brown towards center, 2nd primary 73 mm-32 mm sheathed - quite a patch of brown feathers on rump - feet green. S/R - same as G as regards plumage & bill - ~~ey~~ iris a red-green flecked all over, no outer gray ring 2nd primary 85 mm total length 30 mm

July 8 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
sheathed. G/S - of N brood 2nd primary
121 mm fully unsheathed - 10 primaries
1st with a white leading edge
leading edge on 1st feather of pollex
white, about a 15 mm tip of white
on ~~[illegible]~~ secondaries - first white
tip on 7th primary but only right
around rachis on primaries 7-8-9-10 -
but tips including rachis white
on all secondaries, iris quite
reddish, 8 mm of frontal sheild deep
blood red, bill smooth gray,
legs ~~[illegible]~~ dull yellow green.
G/B - much as above bird but no
white tips on primaries, 2nd
primary 131 mm, middle rectrix 57
mm, legs dull gray green. S♀(?) B/S
blood red unfleched iris eye, bill ivory
with pied on upper bill, frontal
sheild ~~[illegible]~~ dried blood red - 5 mm
claw on pollex, 2nd primary 136 mm
mid rectrix 55 mm - no evidence
of molt, no white tips on
primaries but all secondaries
with white tips, G/S of S brood
eyes gray green fleched red, bill
mottled ivory to nostril, head, top
mostly dark gray few light
gray feathers, brown on
rump and on flanks 2nd primary
94 mm - 30 of it sheathed, mid
rectrix 43 mm 7 of it sheathed
B/B 2nd primary 76 mm. 30 mm sheathed,
3 mm claw on pollex, 10 mm of

Ilion 49

July 8 Jewel Lake, Tilden Park, Contra Costa Co., Calif.
tip of bill worry, otherwise plumage much as preceding bird - During the course of trapping today I picked up R3 of the N brood at I13 and found what appears to be another brood nest (of S pair?) about B15 - also someplace in that area saw what looked like the beginning of another nest. - There should be at most of unmarked birds on the lake 1 adult & immature from the S area and two immatures from the N area. R|B and G|S both got into the trap without coaxing, they were found in the trap when the S ad. - B|S - was driven in. - While the eye on G|S was reddish it still had a flecked appearance and was still not the clear red of the adult - B|S & G/B both flew away on release. The white tips of primaries present on B|S were not found on any bird examined after that. Also I noted something peculiar about the primary coverts on that adult that I didn't note at the moment and I have since forgotten what it was - something about the pattern of white as I recall.

July 10 - same locality - about 4:35 p.m. while trying to drive some of the birds by throwing stones - one of the stones hit X/P at position E 9.25 - quickly two other

lion
49

July 10 - Jewel Lake Tilden Park, Contra Costa Co. Calif-
im natures gathered around the injured bird. It seemed to be bleeding at the mouth but can wiggle its tail and move its wings. Don't know where it was hit - sure hope it pulls out okay.
At the moment G, B/S, R, R/S, and one unmarked bird are feeding at F+G-8.
A moment ago the unmarked bird made a pass at the tags on B/S but was unable to get close enough to touch them. The unmarked adult from the S end has been seen this afternoon too. About 4 p.m. the N ♂ was with 4 young at J26 and then about 4:20 p.m. the N ♀ B was chasing all of the immatures out of the area at G15-16+17. A moment later 4 young appeared there and then slowly drifted northwest towards the island from the boat. Those two flying immatures that are unmarked have been the leaders in that N brood - probably the oldest - and consistently are the first to fly when alerted - by 5:05 p.m. the injured bird was dead. It is one of the two smallest birds in the S brood, I'm sure sorry to lose it. Guess I'd better skin it out. As I worked over to get it, all the bird previously feeding in that area worked down the cat-tails on the west side and onto the open water

...llion
...49

July 10 Jewel Lake, Tilden Park, Contra Costa Co. Calif. - at H18 - the marked adult of the S pair flew to D25 - shortly after I was out of the water there was some commotion at the N end of the lake - I suppose the N pair cleaning all the interlopers out.

July 11 - The bird Y/P 45-624032 that died yesterday was skinned today. It had been hit in the sacral area and suffered a severe internal hemorrhage - the coelom was pretty generally filled with blood. As nearly as I could determine it was a male - there were two quite distinct adrenals - yellow and in addition - two oblong yellow bodies that I suspect were testes. The skull was single layered over the entire ~~body~~ ~~...~~ head.

July 12 - same locality - at 4:45 p.m. - 8 or 9 birds were seen feeding in area F-H 10-13 There were 2 unmarked immatures & 1 unmarked ~~...~~ adult - and in addition R|S, R, G, Y, G/B, R|B, S|B, ~~...~~, G|S,. Right now, 4:50 p.m. - I am able to see 3 unmarked immatures and 1 unmarked adult - just now B has chased all the birds out of the area N of F9 - even chasing G/B around the point, she alighting at F10.4 - then she retreated north towards E12 - the birds routed included at least one S pair adult. [Sitting in the car at BB9 - I can distinguish, with these

R

Fulica americana

July 12 Jewel Lake, Tilden Park, Contra Costa Co, Calif-
Zeiss 8 × glasses loaned to me, every tag on all the birds in sight - the furtherest having been G/B (the most difficult) at G15.12.] Now all the immatures & S adults seem to be in F&G8. There are at least 10 birds visible there at the moment. G/B & G/S, both of N brood look very much like adults today except for the dull bill - the head color is fully as dark as that of an adult. Side by side with an adult - I guess G/B is not so adult looking after all - the general body color & proportions are those of an adult but the head is still much too light. and G/S looks even less like an adult. The birds still with the light gray on their heads are G/S, G, R/B just a little. R is much like G/B, as ~~are two~~ is one of ~~the~~ the unmarked birds. Obviously immature but with dark heads are 2 unmarked birds, Y . Just now G/B just chased Y a few feet in area G7.3. I have seen no signs of antagonism caused by the presence of dangles as yet - no have I seen any evident attempts to remove them by either pecking at them or by scratching at them with their feet. - At 5:30 pm. B crossed from K28 to L25 with four of her ~~to~~ new brood - they are very colorful around the head but apparently have lost all the plumes from the body - instead there appears to be

Fulica americana

July 12 Jewel Lake, Tilden Park, Contra Costa Co, Calif — a whitish down tinging the black body down — this may merely be optical illusion tho. At the same time the B was working along the side of the island and finally crossing to near the N end of the boat — S moved down the E side of the lake and crossed to H18 with 1 young — thus 5 young are accounted for.

July 13 — same locality — Still can account for 3 unmarked immatures and 1 adult — B/G, R and the 3 unmarked immatures seem to stay pretty close together — but I believe one of the unmarked birds is of the S brood — it doesn't seem capable of flight. Noticed this morning that if several birds are moving thru the Potamogeton they tend to get in line, not as a sociable move but rather because the first bird thru clears a path that the others can follow. [I have not seen B/S since its release] In the last few minutes B has been near M25 with 2 young and S has been at F27 with 1 young (11:45 a.m.). The S bird came into area H18 about 1:05 p.m. and promptly proceeded to drive the 5 imm feeding at G17 to the east & S parts of the lake. A moment later the S bird was chasing one of its own young in that same area. One of the new brood young was run down and caught at H12 — following the

54,05
19.97
34.08

llion
49

Fulica americana

-64-

July 13 Jewel Lake, Tilden Park, Contra Costa Co, Calif — unmarked adult of the S pair. This young R 2. cheeped vigorously as the boat gained on it, and when I reached out to pick it up it flipped over on its back kicking out with its feet — as I picked it up it repeatedly peched at me and at the cloth bag I put it in. Otherwords, the fight pattern is present typically even at this tender age. 1:40 p.m. Weighed

54.05-19.97
34.08 → 34.08 gms. - toe clipped a little more. Top of head still quite bald - blue skin over eyes. Orange plumes around head - especially heavy on chin, no plumes above eye nor on crown area. Bill still like that of newly hatched

(very active and hard to hang on to - orange plumes still on wings but the plumes formerly on dorsal body seem to have faded to white and are completely absent from undersurface of body. TMT 18 mm, 1st toe 10 mm, mid toe 25 mm, bill f shield 16 mm. Also noticed 4 wax feathers on post edge of eye on each side. Iris a muddy red-brown. This youngster was silent all the time it was closely confined but it peeped & whewred almost constantly while being handled. - On two occasions today when the B bird routed the several assorted birds in her territory she came "poonking" across the

July 13- Jewel Lake, Tilden Park, Contra Costa Co. Calif. water. Apparently in times of crisis territory breaks down, for the N birds will tolerate other birds deep in their areas so long as I am on the water with the boat. About the time I left (7 p.m.) one young was wandering at ♀28 and the N♀ was working across from the island area along the dam to pick up the lone bird. Another young was on or near the new N egg nest. This nest has been much built up and apparently is much in use as a brood nest.

July 14- same locality (8:15 a.m.) Apparently the tags have been lost off one yearling since I can see 4 unmarked ~~young~~ immatures in addition to 1 unmarked adult this morning. That other wood nest, found July 8, is at A15.5. It is a very well built affair and may have been destined for eggs. At 3 p.m. caught R3 of the new N brood. Reclipped its mail- bled some- caught it at K26 after it had dived to escape - it went under twice, the second time I was able to follow it as it swam immediately under the pondweed. Both times when it came up for air and when I caught it - it "peeped" vigorously. After I got it to the car it pecked but not while on the water - it was so tangled

7:15 p.m.

34x53 #1 p.
35x51 #2 p.
35x55 #4

47.01
21.05
25.96

Illiam
949

Fulica americana

July 14 Jewel Lake, Tilden Park, Contra Costa Co. Calif. - in pondweed out there it had no chance to fight back. It was weighed - 51.18 gms. Its plumage is much like R2 - with white faded plumes on its back, orange on its wings & head area - the skin on its dorsal body is black, but on its wings, and neck the skin is flesh colored - on top of head - the baldpate - it looks severely sunburned - the down on the ventral body surface is so dense as to be nearly impossible to get thru to see skin color - dorsal down is nowheres nearly so dense. The ventral skin seems to be white. TMT 21 mm., mid-toes 28 mm., hallax 11 mm., bill & shield 18 mm. This bird has nearly a complete ring of wax feathers around its eyes. Pollex claw about 1½ mm.

note:- Territory seems to be a function of brood and dependent upon either eggs or young being present. The south pair has completely deserted territory defense since giving up their last nest attempt - but on the other hand the N pair had tolerated other birds in their territory with both nests until they started hatching, first they tolerated mallards until the day they started hatching and then they tolerated the old brood up until the very day their second brood started coming

514
27
467

Note: - cont'd. -
off - also, as soon as the S pair gave up their territory the N pair expanded into it - however during recent days, with bother of trapping on, they have relaxed some, and concentrated on keeping ~~birds~~ other coots out of the area north of a line across about 17.

July 15 - Jewel Lake, Tilden Park, Contra Costa Co. Calif. - At 8:50 a.m. R, G/B and 3 unmarked birds were feeding at H6 - B with 2 & 3 young at D22 and S with 1 young at M25 - no other birds visible. About 9 a.m. R, G/B and 4 unmarked young were chased (by whom?) out of the S area to E-H16-18. R/S is feeding now (9:05) with an unmarked bird at H15 and B has just come down, past the boat, chasing all the birds feeding near G17 across the lake to C15. Only 2 young seem to be following B - S is at L19.15 feeding 1 young but the 2 young that have been following B are going over to him - also one young is crossing to his position from L21. At 9:45 a.m. R/B was taken in the hook net trap with very little trouble - Wt - 487 514-27 second primary 97 mm - 25 of it sheathed ivory on bill for 10 mm - at upper post end of ivory there is a 2 mm spot of yellow, also the shield is a yellow green with little evidence of red in it - eye - with a concentric ring of red, brown inner

Fulica 49

July 15 Jewel Lake, Tilden Park, Contra Costa Co, Calif — and outer bordered with greenish tinge — ~~no wh~~ very slight white tip on 10th primary otherwise none on primaries — little group of feathers on leading edge of wing just in front of 1st primary are white on their leading or ventral edge. These are not covert feathers — leading edge of 1st primary white but not of other primaries. No evidence of wear or tear on the tags, on R/B looked as good as new. G/B seems to be the ring leader in the N brood — when they go some place its in front, followed by an unmarked bird and then R. The other unmarked birds then follow behind R. Just now G/B R & 1 unm. started from H18 towards F23 but S came out from K20, kept a lead on them as he angled out, and turned them back, without actually charging them but rather just by "pukking" and cutting them off. Now they have returned to H18 and he came around by the boat and has slowly moved them out to D18 — now they are starting north. S is behind them and B is coming out from K20 to help head them off. he got ahead of them, she turned back, and now 5 birds G/B, R & 3 UNM are leading S — they are still milling around at D20 with the S north of them, B is coming over and actively charging and

Allison 1949

July 15 Jewel Lake, Tilden Park, Contra Costa Co, Calif — splattering after them, driving them south. S has lost interest and is moving off north. B is "poonking" as she chases a single bird. R/S caught in west trap about 12 ~~p.m.~~ n. wt - 520-22 498 gm. White tips on primaries #10. Bill sorta battered — 2nd primary 108 mm, sheath 23 mm. Same pattern on feathers in front of primary. Tag on left side separating around the lower edges. Recaught 45-624034 - tags B/S lost - retagged R/S - wt. 425-21 404. TMT 50 mm mid-toe 68 mm, bill from shield 39 mm. eye yellow greenish flecked red. Y/P - eye green-yellow flecked with much red - a greenish area on both upper & lower mandibule at point of pied effect on adult, bill smooth mottled ivory, shield deep blood red - brownish. P/B - frontal shield ~~like~~ and eye like Y/P - head mostly dark grey, few light gray feathers scattered on head & neck. R/S much like above bird P/B + Y/P with green pied on bill etc. The bird formerly tagged B/S and now tagged R/S, had a small torn area on the back of the neck where the other tag was torn out. Apparently it was not well enough tagged - didn't have more than 1/4 inch of torn skin - seems to be still one more untagged young, and still one S pair adult.

July 16 Jewell Lake, Tilden Park, Contra Costa Co., Calif.
At 9:30 a.m. Y, R/B, R/S, R, G/B, Y/P, are all feeding K-L 25-27. Haven't seen either of the S adults for several days nor a few other Tagged birds - I expect they have left the lake for less disturbed areas.

July 19 - same locality - At 10:10 a.m. when I arrived at the lake about six birds were resting at E 4.19 - they were R/S, R/S, R/S, B/P, C/S & R/B. After my arrival they moved - some by flying - to E-G 11-12. In that area also were Y+G. Some moved into the cat-Tails on the E side of the lake, but most of them went into the cove at H12 - where they are now feeding. Right now 10:20, G/B, R/S, B/P are working along the edge of cover, feeding on pond weed - they moved up about as far as H15 - when they turned south and started moving fast - just then B came splattering across and they all splattered to F+G 11. - B stopped at G13 and churned once - also "pranked" several times - the 3 immatures are now at F9. 10:30 a.m. R/B, P/B, G/B, G + R/S are feeding together at F9 - some are scratching and preening but I have seen no passes made at the tags with either feet or bills. S/R has just come out from C11 to feed in open water and G/S as usual is feeding in area I 5. B at J26 just hopped a couple of feet over the pond weed to catch an insect which it

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July 19 - Jewel Lake, Tilden Park, Contra Costa Co, Calif - turned back a few feet to give to a young turning then and proceeding on to M25. 1 young followed B across and now 2 young are moving W from M27 - going into the cat-tails in that corner. It seems evident that the S pair have left the lake, perhaps along with an immature or two. I wonder if they might be shuttling back and forth because I had not seen G for several days and now Y/P & R seem to be missing. B/S & G/S have not been seen for several days - nor has the unmarked S adult. - The tender root material of the Potamogeton seems to be a favorite food - I have noticed that birds seem to be especially fond of the piles of weed that I have piled up while wading or root sections pulled up by the boat paddles. - 1 young seemed to be alone at I 12, working its way N - two imm. were feeding unmolested just out from the cat-tails where the young was - now 12m S is at N26 and P/B is feeding unmolested at H27. - Y is feeding at H14.12 and G/S is feeding at H15.2 - now 12:01 p.m. both have turned SE and are working across the lake - B w/2 young is working S at L25 - one young close into the cat-tails with the parent - the other about 10 feet out and a little behind - now (12:03) ~~the~~ B and both yng are out on open water at K24 -, more or less

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July 19- Jewel Lake, Tilden Park, Contra Costa Co. Calif.
working back and forth in no particular pattern. Both young are feeding themselves the one is tailing the B. Now (12:10 pm) S has one yng at 126.5. The yng is resting on a floating log while the parent occassonally feeds it- the yng is preening, stretched up once and flapped its imaginary wings. Now both S & 1 yng are side by side, both busily preening. This yng seems to have lost the white plumes from the body and most of the white plumes from the head it has some suggestion of white plumes on the head, but very slight the bill is still bright red. After about 4 min preening S is back in the water feeding - didn't rest at all but preened continuously for the 4 min it was out of the water. The yng just hopped into the water to follow S who is at L24 - B has 2 yng at 120 - both of these seem to be younger than the yng w/ S. They have colored plumes on the head yet, and some white plumes on the body. The head plumes do appear much faded however. Now (12:23 pm) S has 1 yng at 120.21, B has 1 yng at I 19.6 and 1 yng alone is moving N at L24.19. (12:25) B has just emerged from cat-tails at 118.10 w/ 2 yng and is moving S close to cover occasionally turning back to feed the yng - this young has no white body plumes but has pale colored plumes on the head.

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Fulica americana

July 19 Jewel Lake, Tilden Park, Contra Costa Co, Calif-
P/B is now feeding (12:29) at I24, S at M20 & B disappeared at H15. Now (12:30) a single young w/ white body plumes is moving E at J29 - on the edge of the cattails. 12:32 - B w/ 1 yng is moving W at J19 - at the W end of the boat she turned, "poonked" several times and started charging P/B (at I22) - P/B started splattering and B followed splattering. B finally alighting at D15 - the yng w/ B joined S, or at least close by, it is now at L20.25. "whewring". S w/ 1 dark bodied young is at L20.7. feeding. (12:36) B is beside the boat and the yng that was with her is crossing to her, "whewing" at 2 second intervals and has now joined her. Now (12:39) all is quite - S is just climbing on a floating object at M20.23 - went over and off the other side leaving its yng there, B (12:40) is moving N with a pale head plumed yng at K23 - staying close into shore. S at 12:41 is up on the board at M20 again stood still for about 15 sec, crossed and into the water - to feed at M20.22 - the yng is still lying down. B is at L25.21 the yng being right beside her. Yng at M20 is now standing and preening while S feeds nearby. B w/ 1 yng has gone to cover at N26.20. 12:46 the yng at M20 is in the water

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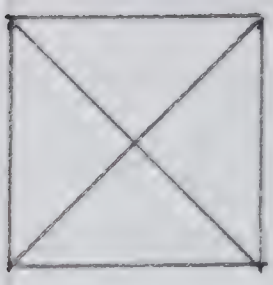
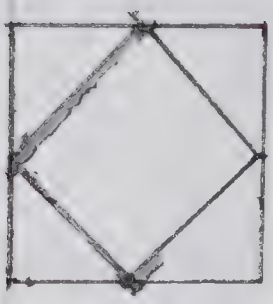
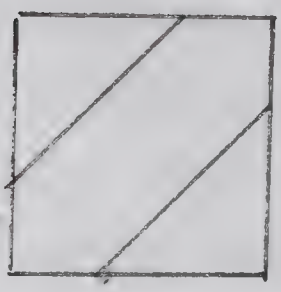
July 19 - Jewel Lake, Tilden Park, Contra Costa Co, Calif
Again, quickly disappearing into cover along the island. 12:47 - 2 yng. alone, are feeding at C20 - working towards H18 - one is 2/3 the size of the other ~~the~~ ~~bar~~ neither have plumes on the body, nor wings, the larger has profuse white plumes on head - the other still has some yellow-orange plumes on area just behind the eye - both have the orange wax feathers around the bill. Both have the "sunburned pates". They are busily feeding, working around thru the pond weed much like adults, picking up food from the surface - they are now (12:53) together at D21 - one has "charged" and captured an insect. 1 has now moved E from view, but 1 is still busily feeding at D21. 12:55 - S is again in view w/ 1 dark bodied young at L20.16. These 2 alone appeared to be a little younger than the bird w/ S. - now 12:56 - they have both vanished to the E - both have bright reddish bills. 12:58 - B is still out of sight and S w/ 1 yng is at L21.8. At 1 p.m. 1 dark bodied young is "whewring" at L23.19 while S is feeding alone at L20.16. - There has been no crowing nor fighting since about July 8. The apparent



July 19 Jewel Lake, Tilden Park, Contra Costa Co, Calif- absence of the S adults is no doubt the reason why. - Now (1:05 pm) the dark bodied yng has rejoined S at L21 and they are moving rapidly N about 10 feet out - in fact may be cutting over towards K26 - no they have turned in to the tree on the island where S fed the yng - now they are moving on N. From the rear that yng with S seems to have quite a bit of white plumage on its head. Considering the infrequency with which it is fed - this young seems to be merely accompanying S mostly feeding itself - tho at 1:09 it did come over to S at M26.13, beg and get fed twice. Now the yng is on the floating log at (1:11) M26.4 and is stretching for food - then preening and 30 seconds later back in the water behind its parent. (B has still not been seen) 1:15, S is out of sight and so is the young. 1:18 - a large limit - on which I could not see the tag - was on the water at F10 - it seemed alerted when I stepped out of the car - and after about 30 seconds - flew - dragging one foot, to D12 where it was lost to sight - could it be that one of the missing tags is on an injured bird that is extremely wary? - 1:24, had a "pukk" and S w/1 yng was feeding at M25.20 - a moment later B came out in the same area - a minute later they all have disappeared again





R/S

S/R

R/S

R/S

Fulica americana

July 19 Jewel Lake, Tilden Park, Contra Costa Co, Calif
1:28 - S is feeding now at M25.22 w/1 yng. 2 unattended yng at 2:07, crossing by the boat to L21 — at 2:18 these two birds crossed from M25 to M27 - at 2:25 S w/1 yng crossed the same area to the raft and is busy preening - now 2:27 yng are at M27. , K28. , H29. . B is at K28.7 w/1 yng. (S quit preening at 2:29 and took to the water) preening etc - standing on a mass of floating cat tail. At 2:33 B is gone from that perch and now out of sight. 2:38 S is moving S at K23 w/1 yng - occasionally turning to feed the yng — For awhile about 2 pm. P/B, [illegible], Y & G/B were feeding near H17+18 unmolested - about the same time the 2 unaccompanied yng passed thru the area, but unmolested they drifted back S. 2:50 - S w/1 yng at L21.20, B is still out of sight. 2:58 - S is at K19.20 w/1 yng - B is crossing from E24 towards the island followed by 3 yng. They are not following close tho but rather are wandering all over the general vicinity of her path feeding themselves - she is feeding some - occasionally turning to give food to one young that is now closely tailing her — at 3:00 p.m. 2 yng are at G24 wandering about feeding while B w/1 yng is at K24 approaching the island

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July 19 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
now turning S towards the boat. S
is in the cat-tails at M20.12 and the
yng with him spent the last couple of
minutes on the ~~p~~ board floating in M20.
3:04 - S and yng have vanished - ~~no~~ - yng
is back on the board preening - B and yng
is out of sight - but 2 yng are feeding
in open water - ~~bot~~ both at G23 - S
is beside the boat - now has moved into
the cat-tails. S is alone on the water -
at G12 - moving south rapidly (3:08)
B is at M20.23 and 2 yng are - or
were lying on the board there - now they
are both in the water - S "punked" as
I got out of the car. S has moved around
E9 - and has charged 2 imm. feeding there
they are all in area G6 now - don't
know where S is - The yng from
G23 moved quickly to cover at M25
when I got out of the car but the yng
with B did not respond. S (3:15) is
feeding at F9.9, 8 imm are feeding
in two compact groups. 1 at F6 the other
at H6 - at F6 are R/5, R/S, G, G/B -
didn't get tags of other group - now 3:20 -
they have broken up and are returning to
feed at F & G9. S is again out of sight.
At 3:27 - P/B feeding along cover at H12
took immediate notice when S at F10.9
started "punking" - P/B then slowly
but jerkily and alert moved on N. still
intermittently feeding - while S continued
to "punk" - 3:30 - P/B is at G16 - no
sign of - oh - here comes S at H13 - P/B

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July 19 Jewel Lake, Tilden Park, Contra Costa Co, Calif.
is cutting across the lake towards SE and S is coming out to cut ~~the~~ it off, still no charge - just S moving rapidly - now both are out of sight. moving in at D13. B w/ 3 yng more or less in attendance, is at M26 - 2 yng are moving across, now at M26.21 - (3:36) a 4th yng is moving out, following B who is moving across to L27 w/ 1 yng - now B is moving out towards K26 - 1 yng is moving E at K28 - now 4 yng & B are scattered from K28 to L27. - S is still out of sight - B now has (3:40) 3 yng at J28 but one went back to K26 - now returning to join the brood. - (3:48) B has returned to M26 w/ 2 yng - 1 yng is at L27, the other at K28 - both moving in the direction ~~the~~ of the parent. - seems to be only 4 young in this brood now. 3:51 - B with 4 yng within ten feet of her is moving out from L26 towards K25 - and is now heading towards L24 - with 1 yng tailing and 3 more feeding 2 to 12 feet behind her. - 1 yng seems to be regularly present (begging?) to receive food while the other three are feeding by themselves, more or less tagging along - 2 seem to always be together - they the most independent while a 3rd stays more or less in her area, but feeds alone, occasionally getting food from her - #4 tags close to her, being fed regularly - 3:55 - S just "pukked" and then moved

Clion #49

July 19 Jewel Lake, Tilden Park, Contra Costa Co, Calif -
S to do some house cleaning (from H12) 3:57 - B is now at F21 - still with 1 yng tailing her another about 4 feet behind, and the other 2 clear over at H23. - B is not moving straight, but rather zig-zagging around picking up food. S is (4:01) again at H12 - feeding there. 4:02 - B is now at D20 - with 4 young momentarily closely grouped. (Boy would I like to have my boat ready to go now to catch those young) 4:04 - S "pukked" again and is moving N along cover at G16 - B is out of sight towards B21 - but 2 yng are out at C20. - (4:05) - now they too are in. S is working unaccompanied along H17 - 4:10 - S is still working along cat-tails at G16. 4:18 - Y, G/B & P/B are feeding together at G7, G is at F5 with R|B, S|R is nesting with a turtle at E4.19 - G|S is moving over to join S|R. 4:45 - a few minutes ago G|S dived coming up it brought some pond weed filaments hooked onto the ~~tag~~ wire end of the tags which gave it trouble for about 30 seconds - better see if I can't design a deal eliminating that ~~tag~~ wire end. - At 4:35 B moved over to L26 with her brood and then down to L20 at 4:43 - S turned up at M20 - now 4:51 - S is busily feeding 1 yng at L20.25 - while 1 more is swimming across to join the B w/1 yng at L20.3 - 4:55 - B is cutting across at J21 w/3 yng while S stays at L20 w/1 yng - B at J23 stopped to feed one yng and is now

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July 19 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
pressing on - with one yng tailing her, another about 8 feet behind and a 3rd about 20 feet back - B is (4:58) at I24 - on the edge of whats left of clear water. At 5:02 B is at K25 and has been joined by a 4th young - S is out of sight. 5:05 S is at M20 - B is at K26 - feeding 1 yng, another young is at K25 - B is moving towards M26 taking 2 yng while another young has moved to K27 where it is feeding alone. At 5:09 - 3 yng are together at K26 - moving E, B has one yng M26 moving towards the cat-tails and S is feeding alone at L20.15. - Time to go home for now. -

July 20 Lake Temescal, Alameda Co. Calif. - 6 immatures seen on this lake, all about 2 weeks younger than the Jewel Lake S brood - these are still all in the light gray plumage - perhaps the older of these is a week younger than the youngest S brood. - A couple of the birds examined at very close range - one had the dark top of head, the rest of neck & foreparts the very light gray of a young bird - the primaries on this bird were just beginning to develop, may have been 30 mm long and mostly sheathed. There are at least 7 young on the lake - 3 having been seen in the cat-tail growth at the S end while

Fulica americana

'49
July 20

Lake Temescal, Alameda Co. Calif -
at least 5 were feeding on the open water. One of the at least 5 adults chased one of the large immatures - the bird diving to escape and swimming a long distance under water - a ♀ was "pooping" at the S end in the cove and a young could be heard "wheezing". Seems to be 2 broods on this lake - I have seen at least 3 imm. belonging to one brood - and the two parents. When the two parents came out of a cove they were met by two screeching begging young, behaving much like young Gulls. The parents ignored the young and went right by them, whereupon the young went into the cove where the parents had been feeding and fed themselves - they were soon driven out by a dog - and fed upon insects resting upon masses of floating algae - at once instance the ♀ escorted / young across some open water - the ♂ also seems also to be agitated - is constantly "pooping" and making that partial growling note. All three of these young are nearly the same age - all with black foreheads, all some with a narrow dark stripe down the back of the neck. One of the adult coots out on the open lake attacked one of the mallards and drove it off. The mallards

Allison
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July 80 Lake Temescal, Alameda Co. Calif. -
seemed to keep their distance from the one adult coot - and when another coot came out from the S end they all moved - one duck that did not move was charged, then splattered at - the duck flew a few feet - the coot churning when it settled back onto the water - territory seems to be in effect here - one adult after chasing the mallards moved on towards another adult - this bird retreating to its brood near the E side of the lake - after the N bird beat its retreat the other bird turned S. The N bird was greeted by cries of begging as it came in near the place where its 5 young were busily feeding in a mass of Potamogeton. Although the young made the begging screeches, they did not rush over to meet the approaching parent. - There are 3 broods on the lake - the 3rd one consisting of birds that are about 3 weeks old - they still have natal down but have lost all plume feathers, their bills are no longer bright red but rather a dull brownish or orangy color. 2 of these young were seen, belonging to the ♂ & ♀ one which ~~[illegible]~~ was responsible for chasing the mallards and the other coot out of the area just

July 20 Lake Temescal, Alameda Co, Calif.
W of the rocks. As the coots fed in the pondweed the mallards respectfully pulled over to one side of the lake to feed and rest, out of the coots' ways. Both of the older broods seem to be very nearly the same age - the probably the youngest bird of the 5 in the N brood is about the same age as the oldest of the S brood - the youngest bird in the N brood has the dead plumage similar to that described on p. 39. Two seem to be without evident under tail coverts while 3 have under tail coverts present - the oldest bird in this brood has the back of the neck nearly solid dark gray but with frontal area still light gray.

July 21 - Jewel Lake, Contra Costa Co, Calif - 8 a.m. The 9 imm on the lake were resting at D5 + E4. - as I came up the road they moved ~~on~~ over to G8 - 1 yng has been close behind S ~~for~~ awhile - but once ~~I~~ left S to follow 2 other young across from L24 to K27 - soon the yng started "wheezing" and soon afterwards S started moving from M20 over to K25 where the young had come back to meet him - the young got into the begging pose as the adult came up to it - this begging pose is one in which the young flattens its neck and body out on the water and comes up to

July 21 Jewel Lake, Tilden Park, Contra Costa Co. Calif.- the parent with its head and bill turned up (this same behavior was noted yesterday among the N brood birds on Lake Temescal. At 9:30 a.m. 6 of the imm. are working from G10 towards H12 - with G/B & Y at the later position - following in order are R|B, G, P/B. - with G|S at G10, R/S and S|R at F10. - all birds are busily feeding now —

note:— When I was handling the birds the other day I noted that their fecal pellets were composed mostly of green vegetable matter, but also had a decided gritty feel to them as if considerable sand was present. —

— now 9:37 - most have quit actively feeding and are resting or preening. 3 or 4 are still dabbling around picking up bits here and there but none seem to be really busily eating. - I have noticed now that 4 different birds have scratched their neck where the pin is thru it, and I have also noted that each of them in scratching did so gently - not as if trying to rid themselves of the tags - but rather as if scratching a slight itch - as I would expect to occur as the skin heals around the pin. - Now 9:40 - most of the birds are busily feeding again. - but R/S is still resting & preening - still since about 9:36. - the head shaking while feeding that is so evident in these birds is not a result of tagging. I noticed this

July 21 Jewel Lake, Tilden Park, Contra Costa Co, Calif. -
same - or perhaps more violent - head shaking among untagged birds on Lake Temescal.
9:46 - R/S is still standing on a floating cat-tail - just now has gone back in the water & join S/R feeding at G10.18. As S/R is feeding R/S is just resting on the water nearby, watching. - The base of the bills on G/B, P/B, and on R/S is becoming very light - not ivory yet - but a very light gray, with the distal parts of the bill still darker - Y, G, R/B, G/S + S/R all still have bills that are a mottled color, but of about the same shade from end to end. P/B still has a few flecks of light gray on the head, Y has an unflecked head, G has a head with nearly as much light gray as dark, and R/B is only slightly flecked, the smoothest looking bird. R/S + G/B both have dark gray unflecked heads. G/S has as much light as dark on its head - while S/R has a head appearing dark but profusely flecked with lighter feathers. 10:00 - S first moved down to H14 chasing all the way to G9 - then S spattered to F9 chasing 3 imm to G6 - & to the chase at F9 S "punched" 3 or 4 times - now 3 yng are working towards imm at G12 - all 3 apparently "wheeling" - now 10:04 - S has moved back to G10 - "punching" and pouting to reveal immatures hiding there. - now 10:05 - 6 imm are at G7, feeding but remaining alert while S is moving N at H11 w/ 1 yng

Move Tag down on
R

July 21 Jewel Lake, Tilden Park, Contra Costa Co. Calif.
leaving 2 young behind at H10 - at 10:08 there 2 yng are at F10 working towards D11 - while S is over along H someplace - 10:09 & imm P/B, R/S, Y, G/B, G, S/R, R/B, G/S are feeding at H+G6. At 10:10 S is at H11 and the 2 lone yng went into the cat-tails at C11, - 10:11 - S is moving S again - is now at G10 and is going into the cat-tails - 10:12 the imm have started moving S and now 10:13 S splattered to G8 driving birds before him, then went into the cat-tails at H8 driving 2 birds out of there, and upon emerging "perched" 3 times, flapped his wings, and is now feeding at H7.6 w/1 yng (10:15) - all the immatures are on the clear water or in the cat-tails at G+H 4. At 10:16 S has moved N out of sight - 5 immatures are at H4, preening, bathing and diving - they are G/B, R/B, R/S, S/R, and G/S - they started to move N but S reappeared at G8.18 and they turned back to G+H 4 - watching the several birds diving at the S end I have not seen any get tangled in the pond weed yet - I have seen several dives - including G/S who was tangled the other day - and the tags have not come up with material hanging on it. At 10:27 at Turkey Vultures made a couple of passes over the lake and G became very alert, with his head up straight and also his tail elevated 20 deg

6/24 Jewel Lake Contra Costa Co Calif. —
the undertail coverts, tho not spread,
became very conspicuous, but only from
a low angle — a moment later R/S at
E9 was in the same pose - but probably
because S was somewhere near; - so he
wasn't S is at G8 - so R/S must
have been excited about the Vulture or
something else - at least it splattered
over to F5 to join the rest of the
crowd. Now 10:33 the vulture is
gone and they have settled down to
uneasy peace resulting from the
presence of S at G8. S/R was hooked in
the pond weed by the tags for a moment,
but quickly freed itself. 10:40 - S coming
out of the cat-tails at G10.1 "pukked"
4 times at a Black Phoebe that was
sitting on some floating cat-tail at
G10.13. As to the phoebe flew S became
quite but went over by water to bird
had been - as S moved up to H11 the
swim moved up to G8 and F9 where
several of them are now feeding. At 10:55
I chased B w/ 1 yng out of the cat-tails
at F30, they moved over, B last
being seen at H26 - as she growled
and "pooked" the yng scooted to
shelter - and when it came too far
out again she "pooked" again.
Growling seems to function only
when danger is spreading and then
the young scramble quickly or
dive to safety - "pooking" as an

July 21 Jewel Lake, Contra Costa Co, Calif-
alarm or warning note elicits a less hasty response, but still the yng gets rapidly to shelter - for the last few minutes G/B & P/B have been feeding side by side at E10.5+6. Now 11:08 they are both in E10 but not side by side. G. & G|S are feeding close together at H4.5+6. R/S & Y are feeding together at I4.21 - I can hear (11:11) a loud "whewr" from near H11 so I suspect S is nearby and soon these leisurely feeding imm are about in for a chase. At 11:13 S is in fact at H6, busily feeding - and a yng is coming out from H8 to meet him at G7. All the imm have vanished into the cat-tails except G|S who is busy and alertly diving and feeding at G4. 11:17 - S has gone into cover at G8 so R/S has come out at G4 and S/R is crossing from F9 to G6 - where S/R is now feeding. G|S moved boldly out to feed with S/R and R/S is more cautiously moving out - now they are all alert and moving over to F5 where G is feeding. 11:20 - P/B feeding at E10.6 was attacked by S from G10 - P/B moved to F7 quickly and is now occasionally feeding as it moves towards G4 - S "pukked" twice after routing P/B and returned to feed at F10 - now 11:22 - S is moving over to G10 and towards the dead tree at H11. 7 imm are -

July 21 Jewel Lake, Contra Costa Co, Calif—
feeding at G+H 4+5 - they are G|S, P/B, S|R, R|B, Y, R/S, +G - in that order as they venture N. - the immatures seem to find the area that was more or less cleared thru the Potamogeton for the W wing of the S trap to be an especially favorable place to feed. Right now six of them (11:34) are bunched up in it - feeding and preening. - G|S left the bunch to feed at H5+6, but Y, P/B, R|B, G and S|R are bunched together at G7, feeding and preening - 11:35 - 3 of the 5 are resting, preening etc - but not feeding - 11:36 - now 4 are still - only S|R still feeding, 11:36 - R|B is feeding again - 11:38 Y+G are becoming active feeding again - 11:39 only S|R is feeding the rest are on the alert - resting and noisily milling around - 11:40 - all are on the alert - with heads up. 11:41 - all but P/B were feeding when a plane came over low and they all became alert and fidgety - 11:42 now rejoined by G|S they are all moving into the cat-tails at F9. 11:45 G/B just moved into F10, from? D11? - the 6 birds from G7 are now all peacefully feeding at F9. - 11:48 - two young fellows came up to the car and all the coots vanished. Just as G|S was beginning to feed again at 11:55 the two fellows came back and all the birds vanished again - now 11:56 G/B, R|B + G|S are visible at E+F 10. 12:00 led by G/B, P/B + R|B are moving into H11 - under the cover of the

Jewel Lake, Contra Costa Co, Calif—
willow there. 12:01 - all the imm are out of sight - 12:03 - G/S is moving north along H12 alone. 12:05 G/B + P/B are feeding side by side at H12.6 while G/S circles then several feet out in the water. 12:09 - S is at L23 - P/B is at G10 now G/S who just got itself badly hooked with its head under-water - the tags hooked onto something or other - but the bird got free. 12:11 - G/S, P/B, G/B and R/B are all feeding close together at G10, 16, 17, 24 + 25. - 12:16 - Y is feeding at F9, G/S at E9, P/B at E10 and G/B is preening on the floating cat-tail at G10. 12:18 G/B just splattered across into the cat-tails at C11 - P/B is on the alt. and I can hear a "twitter" in the cat-tails at H10 or 11. 12:20 G/B just ran down and captured a dragon fly at D10 At 12:55 S came down from the N area chasing the birds S to at least F7. - he quickly went to work clearing out all the birds in G8 - pushing them to G-H5. At 1:05 a yng is "twittering" at H8 and S is moving S from G10 towards that position - emerging at G8 with the yng in tow. - Leopold & Pitelka were with me from 12:20 to 1:45 pm. - so not many records. - at 1:50 S w/1 yng is at G10 - now he is clearing the imm out of area F9 - 4 imm G/B, P/B R/B + S/R were feeding at F9.11 until S drove them out at 1:52 - at 1:53 they were at F7 and he chased them again

July 21 Jewel Lake, Contra Costa Co, Calif -
causing them to move to G & H 4 - now S is at G6 w/1 yng - about 1:15 S was at I 5.1 w/1 yng, feeding & diving in the clear water there. At 2:03 no coots are visible, tho I can hear what sounds like considerable activity in some areas. - 2:05 - G/S is at H4, S/R is at G4 and several more are at F4 & 5. At 2:10 something seems to have the redwings agitated and the 2 coots that are visible seem to be alerted by the confusion among the redwings. Now at 2:15 a young is "wheuring" at H8 or 9, no parent visible - 2:16 the S & 1 yng are at G10 and the yng is giving a low quiet "peep-peep-peep", S is "pukking" and moving N, feeding as he goes - G/S made 2 dives at H4, one of 6 sec - one of 4 sec. - S has moved to E9, he "pukked" once and all the imm got alert, and some have started moving into the cat-tails at F4 - all of them are close to the cat-tails there so they can duck in quickly. Now S is moving S at F7 followed by a wheuring yng - he is moving fast (2:24) at F6 - the imm are dashing into the inlet at H4 and now 2:25 all are out of sight except S at G6 - 2:26 the rediving went up with a roar and S has moved quickly and alertly w/o feeding to cover at G8 - the yng tailing closely - the S was silent in the move - 2 imm at H4 seen

6/21 Jewel Lake, Contra Costa Co, Calif
disturbed also. G/S + diving at G5 for 1 sec
2:29. Now 6 young are feeding on open
water at S end - F G H 4 5. - 2:31 - a
7th imm has appeared - S is at G8.7
8 imm are now visible in the S area
2:33 - something has caused G/B and
Y to splatter for a few feet - R/B at H6.8
made 2 dives of 5 sec each - G/B is
busily bathing at G5.13 (2:35) -
6 imm feeding in a loose flock are
working N to F & G 6. - they are G/S, R/B
G, Y, S/R & P/B - in that order - S is still
at G8 w/ 1 yng. G/S diving for 9 sec at
H5.8 2:41 - and 10 sec, Y for 5 sec -
S/R 5 sec, S/R is now tipping to feed
in the same area - Y is bathing at
H4.19 and another bird was preening at
H4.12. 2:47 - most of the imm have drifted
into the cat-tails to rest and preen only
R/B at I and G/B & P/B together at F5.5
are visible. S is out of sight - 2:49.
Something at the S end is disturbing
redwings and the coots are all
moving rapidly across to I 6 where
they are going into cover (2:55) -
S is moving N at H11, but now (2:56)
has turned back momentarily to feed
the yng is of course - with him -.
2:59 - 5 imm - P/B, S/R, G/B,
R/B and Y were feeding at G8.19+22. Now
G is coming out to join the crowd
from H8. - 3:05 S is out of sight but
2 yng are visible at G20 - 3:06 the
imm at G8 are mostly preening now

July 21 Jewel Lake, Contra Costa Co. Calif — but 1 is feeding — think I'll check P/B minute by minute from now 3:08 until 4 p.m. — at 3:08 P/B is preening at G8 — at 3:09 feeding — 3:10 alert motionless. 3:10.30 feeding — but only 1 or 2 bites — still alert — small birds are chirping in the chaparral and a jay is excited — 3:12 beside G/B and feeding the birds are still chirping — feeding with S/R & Y now 3:13 — is eating pondweed filaments — 3:14 still feeding — but now seems to be hunting for something especially — picking up tid-bits and keeping one eye on low flying plane at 3:15 — still picking up tid-bits and looking around at 3:16 — feeding between R/S and Y at 3:17 at about G8.1 — 3:21 still feeding between R/S and Y — but keeping one eye on low flying planes. 3:24 G/S tried to catch two low flying copulating dragon-flies but didn't — P/B still feeding at 3:24.30 — 3:27 still feeding with R/B and G/B close at hand. the other birds have been preening and rest P/B has not yet — 3:30 still feeding — now now G at F8.6. — the left tag on G/B looks as tho it has gone bad — looks white or opaque & colorless. 3:32 P/B momentarily became alerted but then went back to feeding. 3:34 he stopped to preen — at 3:34:30 S chased P/B and others to G5 where they continued preening to 3:36 when S chased them to E4 — S charged in there, P/B coming out to E6.

4/21 Jewel Lake Contra Costa Co Calif-
preening a moment and then moving rapidly
over to H4 to preen. feed and begin diving
Dived on S
at 3:38- 3:39 S is at F5 moving to G6
and P/B has vanished up the inlet with
the rest of the immatures. 3:41-5 is
moving N to join its lyng which is at G8
S is moving to E8 and now rapidly to
D6. attacked and viciously twice
pecked a turtle at D6 then "punked"
twice and moved back to G7, now
moving towards G8.19 where he is
feeding. 3:45- P/B + R/B came out of cove
at H4.19 and are moving across to
G4, feeding as they go. 3:47 P/B is
out of sight at F4 - 3:50 still no
P/B- a lyng is still "inheuring" at
G9 or H8 - S is out of sight. - 3:52
something chased P/B out from G4.13
to G5 - where it started eating filaments-
3:53 - preening and feeding, mostly feeding
at F5; 3:54 - now moving in towards
cove at F4 - now 3:55 alerted with
tail a little elevated at F5.4. 3:56
now out of sight at E4. S is feeding
at F9. 4, facing the wind - now he is
"punking" but turning back into the
cat-tails - "punked" twice - at 4 P.M.
P/B still out of sight at E4 - but
1, R/B and S were feeding at F4.
- & noticed today that the 3 lyng of the N
brood seen today were beginning
to lose the gaudy bill color - and
seemed to have a dull yellowish

4/21 Jewel Lake, Contra Costa Co. Calif -
Tinge to the distal 1/3.

4/22 Same locality - At 9:32 a.m. when I arrived at the lake no immatures were visible, B w/ 3 yng was at H20 and S was alone at G4 - after I arrived he skirted the cat-tails moving to H4 to I 5+6 on down to G8 - "funking" several times as he moved along. Finally about 9:39-5 imm came out at G4 and started busily feeding. 9:40 S is feeding at G10 - G/S, S/R, G, G/B, P/B, Y, R/S are all feeding at G5-G4 R/S being the last to join the crowd. 9:45 - S flew from H19 to K26 to join two yng feeding there - the yng greeted him with a "peeping" note. R/B has joined the imm feeding at G5. It looks as if the B tags are loosing most of their color - better make up another set - may catch her again when I trap the new N brood in a couple of weeks. - 11:20 P/B is at F30 - feeding - a N yng is at I26 - I tried to catch this bird but it dived as soon as it saw the boat pull out and it made good its escape - I'm afraid its going to be hard to catch these young birds. 11:45 - B is at L21 with 3 yng. - 11:53 all birds are out of sight in this north area. 12:20 P/B is feeding at L25.5+6. - 12:27 P/B has moved to L22 and went into the cat-tails there. 12:35 - S w/1 yng is feeding at E4.14.

75.55
1966
55.89

ly 22 Jewel Lake, Contra Costa Co. Calif—
Caught R 2 of the N boood about 5 pm
in one of the hooks of the hook wing
trap - photographed this ilt head in
detail in BW & color — wt 55.89 gms. 75.55-19.66
TMT 21mm, mid toe 34, hallux 11 mm
bill & shield 20.5mm, poller claw 2 mm -
- about a dozen faded plumes on the back
wings still with many faded plumes and
still a few colored ones on the alula only.
colored plumes on head are restricted to
area just post and below bald pate -
pate still quite bald and red but 2 rows
of down feathers are appearing, skin over
eyes still blue, most wax feathers gone
only about 2 dozen on each side of base of
upper mandibille - none behind eye but
a few in front of eye - wire feathers below
eye forward to under side of lower mandible
are still unfaded & bright orange - under-
surface of body a dense brownish down-
ns evidence of any crested feather on this bird
yet - feet and legs a dark gray-green -
bill with black tip, white egg tooth
still present, followed by red orange -
a dark band clear around bill at post edge
of hard bill then partly out to nares -
base of bill & shield still deep bluish
red - the shield becoming distinct and
is 6 mm long — iris is a very dark
grey brown - color is just barely
apparent in it. — rest of many head
plumes or wire feathers are faded except
the band mentioned above.

ly 25 Jewel Lake, Contra Costa Co, Calif. —
At 8:35 a.m. when I arrived, Y, R|B, R/S, G, G|S were all feeding and preening at G 8. B w/3 yng was at J or K 25-26. At 8:51 S came out of cat-tails at H 17 and moved rapidly S - a whewring young following - quickly S moved down - routing the immatures - he got one bird under water - it looked like Y, and apparently held onto the bird with his claws not letting it rise to the surface and occasionally making a vicious jab at it. After about a minute S seemed satisfied and departed - this was at H6.11 - Y has not been seen since - guess I'd better look for a dead bird over there. - I examined the spot but could ~~see~~ find no sign of a dead bird - only a few feathers on the surface - pulled the pondweed away and felt around the bottom with my feet - if Y turns up missing in the days to come I'll know why.

ly 26 Stow Lake, Golden Gate Park, San Francisco, Calif. -
A pair w/1 yng about 2 weeks old seen on the small island E of the central island of Stow Lake. 1 ♀ of the pair seems to have something wrong with one wing, perhaps the feathers have been plucked - at least it hangs in an abnormal fashion. - The ♂ dived for something, brot up what looked like a tad-pole ~~or~~ other small meaty object -

20 Stow Lake, Golden Gate Park, S.F. Calif.—
offered it to the yng, who refused it,
then offered it to the ♀ who took it
mauled it and reoffered it to the
yng, but again who refused. While
the two parents are up on dry land
preening. The yng is bouncing
agily around over the rocks, in the
vicinity of the parents. Now one of
the parents is coming across (the ♀)
to get a piece of bread from among
a lot being thrown to the mallards.
After getting a piece of bread she
crossed back to the ♂, gave the bread
or at least part of it to him, and
the two of them proceeded to break
it up and to feed it to the yng.
What the yng did not eat they did.
While passing to & fro I noticed
that the ♀ got out of the way
of a mute swan. This pair
has shown no evidence of territory
behavior permitting canvasback
and mallards to swim within
4 or 5 feet of them and their young.
Yet a moment late a mallard coming
in close to where one had previously
been resting was charged and
spattered after by the ♂ - now he
is coming across the lake to my
side - the mallards and even
the blackbirds get out of his way -
he attacked one mallard and
charged one Brewer blackbird sitting
nearby on the bank.

July 26 ~~Stow~~ Lake, Golden Gate Park, S.F. Calif.—
The ♀ in this pair is decidedly pale gray in addition to being smaller than the ♂ - 2 canvas backs resting on a rock near where the yng is resting - watched every move of the approaching ♂ - and craned their necks when he dived - pulling them down quickly when he emerged - a ♂ ruddy also seemed to be taking pains to keep there came no echo between the ♂ coot and himself - the cans paid no attention to the nearby ruddy. - the ♂ coot has passed with a rest of the cans twice, without molesting them - but at the same time has chased about 2 small gs that were swimming away from more distant positions. The bird coming with food from some distance seems to invariably give a share it with the bird near the yng, and then the 2 of them together fed the yng. The 2 canvas backs left after each swimming day near the yng without being attacked by the coot.

Middle Channel, Golden Gate Pk, S.F. Calif.—
At last two pairs with yng on this lake at 5 p.m. - the ♀ pair have 3 yng that are less than a week old - still with colored baby plumes — (the yng at Stow Lake had faded baby plumes.)

26 Middle Chain Lake, Golden Gate Pk, S.F., Calif. — the south pair were feeding 1 very young bird, and I heard but didn't see a second — bet that S pair are still hatching eggs — the one I saw maybe 24 hours old but certainly no older. — why does this lake, about 1/4 the size of Jewel Lake, produce 2 broods of coots and 3 or more broods of mallards while Jewel Lake is occupied by only 2 pairs of coots — I'll bet it's the area of marsh vegetation that is available.

27 — Jewel Lake, Contra Costa Co, Calif. — At 8:55 a.m. S was at E 7 — 1 yng at F 8, 1 yng at G 11 & 1 at H 11 — no sign of any immatures — 9:01 four yng are together with B at G 12 — 2 have white on their heads and white breasts while the other two are still dark headed and dark breasted — one of the birds has a nearly pure white color on the front of the head while the other still has a little black mixed in. B in close company with the brood has moved north but S (9:07) is preening while resting out of the water at H 8. 1 immature has shown itself momentarily at H 4.15 — didn't see the color but it is tagged. 9:10 — now G, G/S, R/B, Y, R/S, S/R, are all feeding in a compact flock at I 4 — a bulldozer working the trail along the west side scared them out of the cat-tails

Jewel Lake, Contra Costa Co, Calif.

S is presently out of sight. 9:15 - S is at J 20 feeding with 3 yng while B is at G 20 feeding w/ 1 yng - B tags have lost their color on one side - the top side but are still blue under meth - G|S seems to have one bad tag, tho the colors are still discernable - all the rest of the tags seen today look as good as the day they were put on. 9:21 B is at H 11 moving S w/ 2 yng - the immatures are at F & G 7 - soon to move - At 9:24 every immature is out of sight - it taking B about 45 seconds to do the job - she works silently - but churns after successful completion of her mission. - one of the two dark headed young has the 2 first white spots laterally on the breast - the smallest has none - both the dark birds have a general suffusion of white plumes on their heads, giving them a woolly appearance - they both have the orange chin plumes ~~with~~ which the white headed bird lacks - this white headed (~~all three~~ business looks like a matter of white down coming out and covering the dark, the bald pate is covered and the whole head has a general hoary appearance - the youngest bird still has plumes on the wings but they seem to all be white now - all body plumes seem to be gone.

May 27 Jewel Lake Contra Costa Co, Calif. —
9:35 - G, R/S, SIR are out feeding again - while B w/ her brood is the cat-tails somewhere near G.C 12 - 9:36 the swim flew out of the S end some going into the N pond - almost immediately they came flying back with B close on their tails - and by 9:38 all are back in cover, scattered around the S pond and B is apparently in the cat-tails trying to ferret them out - she is at E 11, crossing to D 12 and is giving an occasional "poonk". 1 yng is loudly wheezing. Made a drive to see if I might be lucky enough to hook trap a yng - but no luck. — The nest at C 12.6 is not a floating nest and is now clear out of the water — it is no longer in use - it had no gangway and has an inside diameter of 6 in - it is 3 feet from open water to the west. The nest at A 15.15 also is not a floating nest — it may still be in use - it has a gangway facing E into the cat-tails, it has an inside diameter of about 6 inches; it is in about 2 feet of water and about 15 feet from the open water to the west. — The nest at K 28.12 is dilapidated but looks as tho it may still be in use - it has a 6 in inside diameter, is 2 feet from open water to the S, is in about 2 feet of water —

y27- Jewel Lake, Contra Costa Co, Calif—
The nest at N26.18 - which was never much more than a platform, is now defunct - it was 2½ feet from open water to the south in about 3 feet of water. The egg nest at N26.4 is still in good repair and apparently in use - it is less than 2½ feet in from open water to the north, in about 3 feet of water - the gangway faces away from open water to the SW - facing open cat-tail areas - there is fresh wet cat-tail & green cat-tail material in the nest - it is a floating nest - sinking with the falling water level - it has a 6 in. inside diameter, 12 in from outside rim to top of gangway, and a 11 in gangway. The rim is 5 in out of the water. - The floating nest at N25.14 is defunct - but something probably frogs, are still using it. The old egg nest at 026.6 looks as if it may still be in use - it must be a floating nest and is in good repair after the trapping in this end it is about 1 foot from open water. - The nest at H17.23 - is a well constructed non-floating nest with gangway facing north into the cat-tails. Open water to the east is 5 feet away, there is about 3 feet of water under the nest - the inside diameter is 8 in, it is 14 in from outside rim to top of gangway; gangway is 10 in long and rim is 8 in from H20

4.27 Jewel Lake, Contra Costa Co. Calif.
Cat-Tails between this nest and open water are not dense- this in good repair this nest does not appear to be in use. - The egg nest at I 4.17 was not floating so it capsized dumping the eggs into the water - it does not seem to be in use- like wood nest at I 4.21 is still in use- has green material in it and because it was not floating has been continuously worked on until now it is 25 in long by 17 in wide, with the nest cup at the E end having a diameter of 7 in. It is 4 ft from open water to the N. has no gangway, is in about 3 feet of water. The present rim is 6 in above the water. - The old egg nest at I 5.17 shows no sign of use, lacks a cup and is really little more than a 7 in heap of dried cat-tails. The nest at C 6.16 is floating, in 3 ft of water. no longer in repair - it may be in use by frogs - it is 3 ft from open water, had an inside diameter of about 7 in. may have had a gangway facing open water to the NW.

Note — one of the birds on Middle Chain Lake yesterday was heard repeatedly giving a "pit-tuck" note as it crossed from the tules to its brood- I have not heard this note from Jewel Lake birds. —— 11:55 at the moment R/S & R/B are feeding together at H 15. G/S and at H 6. - S/R was also in this area until a moment ago. G/S is the only bird that still shows light gray on the

July 27 Jewel Lake, Contra Costa Co, Calif. — head — and then only a few flecks — R/S & Y are both dark headed birds — and good flyers — they will probably leave the lake shortly. S/R feeds with Y & R/S quite a bit of the time and is nearly as dark, but its head is still not the sooty color of Y & R/S. R/B is in nearly the same plumage as S/R — and I believe G is to tho I haven't gotten a good look at G for awhile. — 2:00 — the six imm were feeding at F8 until I came to the car then they moved over to G8 — at 2.04 B went "poonking" from D12 to F10 and without even charging ~~m~~ caused all the imm to vanish into the cat-tails along the W side of the S pond. — G proves to be intermediate in head plumage between G/S and R/B.

July 28 same locality — At 7:20 a.m. S, B and 3 yng feeding at B10 when I drove up. G was at H5. 7:30 S/R & R/S came out of H4 — started out onto the lake when S & B appeared at F9 — they both quickly ducked back whence they came. 7:55 all the S brood imm are ~~feeding together~~ ~~at~~ on the lake this morning tho they have been confined to the cat-tails mostly thus far. S is spending most of his time at G9. — The yng that had the pure white head yesterday seems to be missing today. — the two dark headed birds are both present — the one that had just a couple of white spots on its breast yesterday now has two

4/28 Jewel Lake, Contra Costa Co, Calif. -
white patch that nearly covers the breast-
leaving a narrow black mid-line
thusly → . But still
no sign of white on its
head- just the white plumes, which are
also apparent on its much smaller
dark headed brethern. - the bills on
the 3 yng grade from brightest reddish
on the smallest to palest orange on
the partly white headed bird - all of them
seem to have black tips on their bills and
the deep red base - its the area between
the nares and the tip that changes most
at this stage. 8:15 - 2 yng are at 1/26
- near where the mallards must be-
and 3 w/ 1 yng is at 1/20. - 8:20
a white headed yng with a white
breast having only the faintest black
median stripe is moving E along the
dam at L27. The yng coot pictured
above not only has a black stripe thru
the white but also has one down
the breast -.

— Lake Temescal, Alameda Co. Calif - Watched
the pair and brood between the rocks
and the E shore - once a immature
with light gray breast a head routed
about 6 immature mallards out of
the area around the rafts - and
later the ♂ went to work, trying
to clear about a dozen mallards
out - he then dived for some of the algae
growing on the lake bottom. 4 birds are

4/28 Lake Temescal, Alameda Co. Calif. —
in display off the willow point S of the Rocks.
3 were in display first - and then a 4th
splattered in to join them - after the display
broke off they dibed and tipped in the
usual separation behavior. = An adult
has moved down along the E side of the
lake bringing 3 or 4 dark gray headed
birds with it - now the SE pair are
again cleaning out the 10 or so
mallards from the channel E of the
Rocks. Both birds are at it - and now
only the ♂ is working, the ♀ being
busy feeding on bottom algae! -
The young that was all dark last week
now has a solid white breast and
front of head - this young is actively
begging and feeding with a pair. There
are apparently 2 birds in that
younger brood - now the SE pair
are tolerating a 3rd duddy duck
nearby beside several of their imm.
The SW brood apparently consists of
two young. They are fairly close to the
same age - both have the white fronts
and both have down covered bodies -
their bills are a light yellowish
gray. Both are busy feeding them-
selves as well as taking offered
food from their parents. - The
♀ of the SE pair once this morning
started after several mallards but
stopped when they went up onto
the island - she moved around
in the water nearby, "barking"

188.5
21.6
1669

Fulica americana

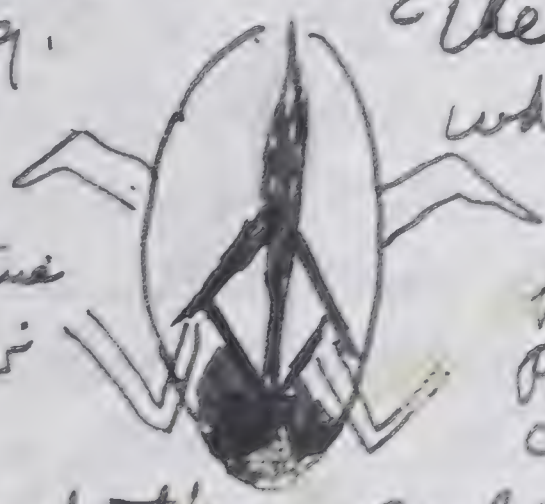
Ap 28 Lake Temescal, Alameda Co, Calif. -
A little while later tho she went up on land after them and chased them off. During this same time the ♂ ruddy was permitted to feed in the SE territory, never being chased

— Jewel Lake, Contra Costa Co, Calif - back at the lake at 12:35 B is at G4 worked across to I5 where she was joined by a yng - then into the bay at I5 & 6 out of sight - as soon as she was out of sight R/S came out at H4 and R/B (12:40) is working from D11 to H11 - was intercepted by S moving out from G9 ~~f~~ and flew to H12 - into the cat-tails - S "puhked" once and cut into the cat-tails towards where the imm - went in. 12:44 - G/S, G, S/R, R/S are all feeding at G5. - a black headed young has just crossed, "whewing" loudly - from D11 to F10 - now 12:48 S is out of sight & R/B is out feeding right where it previously vanished in the cat-tails. - About 5:25 I caught R1 of the new N brood by driving across from H14 to D12 and then working into the cage - down the net - to A17. 4 & 5 - where the cage is. This bird weighs 188.5-21.6 166.9 166.9 gms more or less wet - TMT - mm, mid-toe mm, hallax mm, bill f shield mm, shield mm. pollex claw mm. It has not made a sound yet, tho it tried to peck and scratch when

4/28 Jewel Lake, Contra Costa Co, Calif
being moved from the cage to the sack.
The R/ claw clipped on this bird is still
& very distinctly clipped - this seems to
be a good method of marking hatching
costs. This bird gets band 496-71607
tho it is still too small to tag - but
should be big enough next week this
time. This bird has light gray feathers
with dark gray tips covering the pate
area - in place of the orange wire feathers
around the pate are bleached wire plumes
- there are a few orange wire feathers on
the chin and under the eye - all wax
feathers are gone - on the bill the egg
tooth is gone and the tip of the bill is
(no: just a few wax feathers are present
around the base of the bill, hidden by the
very light gray feathers present) - the bill
is marked as shown here - with the
black band just in front
nares - the tip

of the is
a orangy gray-green and behind the
nares the color gradually blends from
a light flesh color to a blood red
on the shield - the iris is a very dark
opaque grey-green - the dorsal-
black body surface is covered by
down - very long down - from the nape
to the tail and flanks - the wings are
still covered with down - and with
about a half dozen orange or faded
plumes present - the breast and
throat area is covered with white

28 Jewel Lake, Contra Costa Co, Calif — feathers — actually with white or light gray tips on dark gray feathers — the sides are covered with a medium gray feathering. The black band splitting the white ~~pr~~ breast proves to be down feathers which continue posterio-ventrally in a peculiar pattern. The thigh is covered with medium gray feathers. and there are two small patches of light gray feathers between the legs — separated by a strip of black down. The oil gland is well developed and very nicely tufted — there is no sign of rectrices or remiges. The feathers on the side of neck and cheek areas are very light gray with dark tips.



29 Same locality (cont'd from Journal p 106) at 5:06 S flew from E 9 to F 16 where it looked like he put on a brief display as he joined B and 3 yng. About 5:07 something caused 4 imm to fly out of the S end to F + G 7 — 5:10 — B worked south from her earlier position to F 9, then splattered from there across the S pond, taking about 15 seconds to scattered the immatures into the south end churning once when she had done so. 5:14 B has rejoined her chick at G 8 and is lightly "poonking" 5:15 — S had worked S to F 11 w/ 4 yng then turned back N as B came out to meet him — the bird R1 —

Jewel Lake Contra Costa Co, Calif—
caught and banded yesterday is the oldest or at least in the most advanced plumage stage of any of the yng. 5:18 - something caused R/S to fly out of south cattails. When it landed its tail was pointing straight up - but not spread. Twice this morning I've heard a low murmur that apparently belongs to the coots - perhaps it is more correctly a series of "grunts" musical ones that is just how it again - it's being given from the area where the immatures are over at H or I 6 & 7 - it may not be a coot sound - I'm not sure. G feeding at I 5 - looks like 1 side of the right tdg is fading - heard that grunting again 5:34 - but I don't think a coot made it - maybe a rail did. 5:38 B is at F4 hunting for immatures to chase. A "punk" by S at C10 sent 2 unattended yng scooting towards cover - but neither bothered to reach it - still no white showing above water on the breast of the smallest bird - no white on head of its nearest but twice as big broodmate the white headed yngs have a narrow black band crossing across the top of the head just behind the eye and this marking the posterior edge of the formerly bald pate. 5:50 - B made another clearing of the pond - this I saw no immatures to chase she splattered across towards

Fulica americana

July 29 Jewel Lake Contra Costa Co. Calif. -
Something 5:53 SIR is feeding at G4-
July 30 same locality - yesterday evening I
was back here - the ♀ was feeding at
H14 when the mallards were chased out
of B12-14 area - she "pouted" a great
deal but made no attempt to attack
them as they fed at D+E17+18 and
then moved to B20 and eventually to
O26. - S was at M26 early in
the evening but was lost track of.
A yng was calling as they caught
someplace near L21 - all was
quiet by 7:30 p.m. - except an
occasional late "peep" by the one
yng to 7:45 - tried to find the
yng one but without luck.
- At 12:40 no coots visible - can hear a
"wheow" at H13 - then a "ponk" at
G8 - several min stated out at H4
but quickly turned back as B+S ventured
out with 2 white headed yng at G8 - a
single black headed & bearded bird at H12
is steadily wheowing at 3 sec and
intervals except for a few longer pauses.
12:45 I believe R1 is the bird with Sat
E9 - no black on ♂ breast visible
above water - the other white-headed
yng is with B at H4. - S at E9
is "pushing" facing me while doing
it. S is circling out from E7 to
C10, "pushing" the car at BB10-
G is out (12:54) at G4 - this bird
has a solid medium gray head and
it looks as tho it has a mottled

Main
#9

Fulica americana

430 Jewel Lake, Contra Costa Co. Calif-
ivory and gray bill. R/B has an almost
flecklees medium gray head while R/5 has
the dark gray head and very pale bill.
G/5 is still flecked on the head, and 5/R
has - 5 came out at G8 and all the imm
vanished at E4 & G4. Both adults are
offering titbits to the 2 white headed
young - and they accept with the usual
begging pose - thusly -

B just caught a dragon fly which was
taken about ten feet to be given to
a wh-hded yng. - So for one black
headed white breasted bird is not
accounted for. 1:05 - the bird I take to
be R/ is feeding with B, working in
and out from G8 to G7. 1:10 p.m.
5 imm coots feeding at F5 and several
mallards are feeding at D5 - with no
indication of conflict. - 5/R has a
rufid medium gray head with a dark
tendency - bill is not especially light -
still a dusky grayish. G/5 (1:15) just
jumped off a log while and after much
tail wing flapping - learning to fly?
no) yet today. 1:17 - 1 wh-hd yng
at H5 while the imm fed & preened
at G5 - then a parent came down
and chased the whole lot of imm
into the cat-tails at G4 - and I
think went right in after them.
- the parent is S.

9

30 Jewel Lake, Contra Costa Co. Calif. -
Just after S cleaned out the imm coots from the S pond - 10 mallards moved out from D5 across to H4 and S was moving from G4 around to I5 - there was no threat, not even a "punk" on the part of S. As the mallards moved around the imm coots came out of cover to feed and green about and on the log at G5. Now 1:30 S/R ran down the log, ~~flattong~~ flapping wings and off the end. - a wh-hd yng feeding at F9 has just a pencil line of ~~p~~ black on its breast - R/S is a sleek looking bird - quite adult looking except for the darker bill and the dark gray instead of black head. - now for some reason, not visible - all the imm flew or splattered to E9 & 10 - R/B & G at least both flew - and so did - I think - 1 more (R/S?). - Y is certainly not present on the lake now. 1:43 - S just came over from G10 and chased all the imm back to the S end. The black-hd wh breasted bird turned up at F10 - loudly "whewring" while S was engaged in chasing imm. - a white hd yng joined the dark one and together both "whewring" they swam out to D9 to meet S. S fed or billed the white hd yng first and then peched the blacked hd yng 3 times - both yng followed S from F9 to C7 - S catching insects all the way across and giving them to wh-hd but peching black-head at every chance -

Jul 30 Jewel Lake, Contra Costa Co, Calif - Incidently, I note that this black headed bird is getting white cheeks and chin but the bill is still quite bright reddish - all 4 yng are now accounted for - this last mentioned young has a fairly wide black breast stripe - the white-hd young following S takes every ~~chance~~ opportunity to feed itself and to chase insects. - now 2 yng at C6 are "whewing" while S defends territory. 2:05 - S chased Y out of the S end - Y landing at F23 and S about F19 - S turned back south with much "puhking" while Y went over into the cat-tails at L23.

July 31 same locality - From 2:20 p.m. to 2:40 - 2 immatures have been seen - S|R & R|B. S has been seen and B heard. - 2:40 - B just chased R|B into cover at I5 - splattering from G8. - A single yng is "whewring" at G or H 10 or 11 - a wh-hd yng is diving and feeding at F10.6 while S preens at G10 - 2 yng 1 wh hd, the other bl hd but with wh-breast chased out of cat-tails at C12 by a couple of kids and a dog beating the brush. - 3:05 R|B has fed since 2:50 at G & H4 - while 11 mallards rested and fed in the same area - tho the coot occasionally showed interest in what the ducks were doing, there was no hostile action shown. - about 3:04 S crossed from F9 to C9 - followed by 1 yng - and the mallards must all be nearly. - now 3:08 S is at G10 w/2 yng - 3:10 G|S shows at G4 for the

4/31 Jewel Lake Contra Costa Co Calif-
first time today - then R/B joins G/5 and they both show some alarm as they move back to H4 and up the inlet. B with 1 dk-hd yng feeding at E5 is the obvious cause for the immatures' sudden departure - but where are the rest of the imm. 3:16 - so far 3 of the 4 yng have been seen today - only the smallest has not appeared. I noticed today the tendency of these birds to follow paths already made thru the pondweed - rather than making new ones - this seems - not to apply to the yng tho. The area cleared where the S swing net was has been a favored area for transit and feeding since the net was removed. 3:33 B cut across from F8 to F4 - scattering G/5 into H4 and R/B and R/5 into E4 - but not satisfied. B went in after the last two imm and a moment later R/5 came flying out - from E4 to B10 while B/jr pursuit landed at F8. 3:37 G/5 & R/B are both feeding at G+H4 - B w/1 bl hd + 1 wh hd yng is feeding at G8. - I wonder if the bird that has been "wheezing" so much today is the smallest bird of this
3:41 S/R came out to feed with G/5 at F5 - for the first time since 2:40. S/R, G/5 & R/B are still immature looking but R/5 looks quite like an adult in most characters. R/B seems to be the first bird (imm) out to feed alone - a position G/5 used to hold. Made of a loop around the

Fulica americana

31 Jewel Lake, Contra Costa Co. Calif.
Lake. (4:18) - when I got back to the car Y and R/S were feeding + preening at B7. the base of the bill on R/S looks as tho it has adult ivory, even the shield looks good - but the tip, and around the nares - is still mottled gray - Y has the mottled gray bill - is still some distance behind R/S in plumage development.

91 same locality - 5:55 p.m. G/S seems to have lost all the light gray flecking on its head - it now seems to have a solid medium gray head plumage - also noticed ~~what~~ what looks like the beginning of a dark plumage, creeping up the middle of its breast.

93 same locality - 4:35 p.m. B and 2 yng; feeding at L25 - both young white headed and surely large enough to tag and band. R/S & G/S feeding and preening at F3. 4:52 - at the moment 3 yng and B are feeding in area J & K 20 - 1 yng is small, black headed & black breasted but apparently with a feathered pate - the other 2 yng both are white - breasted white headed and quite large. One of the larger white headed birds tho doesn't seem to have much light on top of head and I suspect it is the bird formerly called wh-br, bl-hdd. I have not seen for sure a fourth young tho the few minutes I've been here I have not seen S yet, who likely has the missing yng with him

3 Jewel Lake, Contra Costa Co, Calif —
R/B and X are both getting the dark gray head plumage but neither has a whitish looking bill. G/S has the solid medium gray, and a bill fully as light (5 gm) as either of the other 2 immatures.

4 same locality — Been here since a little after 10 a.m. have seen 3 imm but didn't get tag colors — B and one black fronted-black headed yng. Later saw ~~5~~ 2 white-headed yng. Immatures G/S, R/B, X are on the lake — but no sign of the other immatures — nor of S. If these birds left the lake, as I expect they did, it was not under pressure of disturbance, but rather just an emigration.

ote: — Apparently the S end of the lake is the best coot territory. Now the N pair have moved completely into that area pretty much leaving their old area to the ducks and other coots — no longer do immatures encounter the wrath of the N pair when they get in the N end. —

5 Same locality — At 11:15 a.m. L2 ~~tried to escape~~ was caught in the "loop" trap at H14. The toe nail on this bird that was clipped is just a nub easily distinguished from the unclipped nails. Bird L2 banded, measured weighed and tagged — Tagging looks as tho it should be successful — don't sure tho, it takes a good sized fold of skin to tag properly. — the dorsal surface of thas

5 Jewel Lake Contra Costa Co, Calif.
bird is covered with black very loose almost down feathers but with a well defined rachis - not even pimples where the wing feathers and rectrices will be - in fact - the wings are nearly bare - resulting from a growth in wing size but no compensating growth of feather covering. There are still a few colored plumes on the wings but they are mostly faded. Still a slight down sheen on the breast but the complex down pattern on the ventral body surface is missing - feet and legs a grey green - and the eyes are very nearly the same color. Still some bleached wing feathers on back of head and the white tips of the black feathers on top of the head are wearing off. The white under tail coverts are coming out - but still hidden in a mass of black down. Bill as below with a greenish tip, then a black band and behind the black band a yellow-

green grading to flesh color - the whole being streaked with black pencil marks. - the shield is blood red - capillaries or small vessels being visible. - Later while trying to drive for the loop net - I flushed it out of it 18. - it flew the length of the lake and would have left except that it hit the concrete dam, 1½ mile above the weir - and fell back into the lake - at 12 m. I have not seen the bird since then. Can say

Jewel Lake, 500 ft., Tilden Park, Contra Costa Co. Calif.
B with a black headed yng crossing from K25 to F28 about 11:45 a.m. - this smallest of yng now has two large white spots on either side of its breast. but still the black head - pate and all. 12:20 Y and an ~~UNM~~ yng (wht headed) are feeding close together at M27. - 12:55 - about 15 minutes ago B/S and another wh headed yng very close to the same size were feeding at M26 - a 2nd white headed yng, appearing somewhat larger was at M20 and the little bl-hded yng was at H16. 1:40 - now, the first time in 2 or 3 weeks all the N yng are feeding together at M26 - B/S proves to be the 2nd largest in the brood - there being one white headed bird larger and one white headed bird smaller - and then of course little blackie - who just escaped being trapped, and apparently crossed the lake from H15 to the E side, then up the E side to the dam and finally back to the NW corner

5 mi E of Martinez, Contra Costa Co, Calif.
1 adult bird seen feeding on a slough along the highway turned its back on me as I pulled up to stop some distance away. It stayed in that position, keeping its conspicuous bill out of sight, turning its head just enough to watch me but still keeping its bill quite well concealed.

Wilds, H.E.
1949

Fulica americana

-120d.

Aug. 12 – Jewel Lake, Tilden Park, Contra Costa Co., Calif. 1335.
arrived at south end of Lake & found S/B feeding in the center and one unmarked young bird on the opposite shore. Color on S/B almost negligible. Apparently molting from the brownish tinge of the plumage. Kingfisher flew over and rattled. Jack-rabbitt seen along the road. Several Black Phoebes feeding over lake from cat-tails. After watching awhile found B = S/B as it did not look like an adult originally. 1415 left as no other coots to be seen and people present. No mallards

Aug 19 – 1600 – No sign of any coots on arrival but ranger had recently been to the Lake. Green heron flew out of S end and landed in oak up the hillside 1615 one unmarked young bird with red bill & whitish throat on east side of lake S of jutting cat-tails. 1635 there are now 3 unbanded young birds across from where I saw the first one. These are younger than the one I saw last week that was banded. 7 mallards were in the pocket at the NW corner of the lake.

Sept 4 – The two young birds were in the NW corner of the lake in the remaining open spot with app. 7 mallards

B/S
B/S
W
M
11

R/S
R/S
W
M
11

B/S
B/S
W
M
11

Sept 12 Jewel Lake, 500 ft., Tilden Park, Contra Costa Co., Calif. – No birds on the lake, at least none seen, from 2 to 3:15 p.m. today.

Sept 13 Lake Merritt, Oakland, Alameda Co., Calif. – About 8 coots were seen on Lake Merritt this afternoon. 1 of them was a this years bird still with the mottled bill and dull legs. Two more seen were apparently paired birds from last summer. One of them, the smaller, was noted working on the head feathers of the other, larger bird. This larger (♂?) bird bowed its head down, with its bill under water and its neck arched. With its bill under water it was blowing bubbles. There were no sounds accompanying this display. A moment later the larger bird turned away, followed by the smaller.

Sept 14 Berkeley, Alameda Co., Calif. – Looked over the Aquatic Park today for coots but saw none.

Sept 16 Richmond, Contra Costa Co., Calif. – 2 coots seen this morning on the mud flats just N of the mouth of El Cerrito Creek. 1 is an adult and the other looks much like a bird of the year. Neither had tags on them, nor bands as far as I could determine.

– Lake Temescal, Oakland, Alameda Co., Calif. – At least 15 birds on this lake today, including 6 adults and at least one gray billed ~~ey~~ immature. Most of the rest are surely birds of the year, and it was noted that tho their bills are fully as white as the adults, the band on their bill is not nearly so distinct. Of several seen at close range, the eyes are fully as red as of the adults. No consistent plumage differences could be discerned between the age groups, some of the obviously adult birds having already assumed a slightly and

16 Lake Temescal, 420 ft. Oakland, Alameda Co., Calif. -
browner plumage than of the summer. Territory
play was in full play specifically, but there
was no harrassing of the mallards, in fact
the coots seemed to make an effort to keep out
of the Mallards' way. Several territory
disputes were observed, once with a ring of
immature birds gathered in an open circle
about the 2 adults in paired display. that is
until another adult came in and attacked a
couple of immatures on the wrong side of the
line. The boundaries seem to still be about
as I judged them to be earlier this year.
Pairs are still together, and one adult bird was
observed carrying a long piece of cat-tail material
into the cat-tails at the S end.

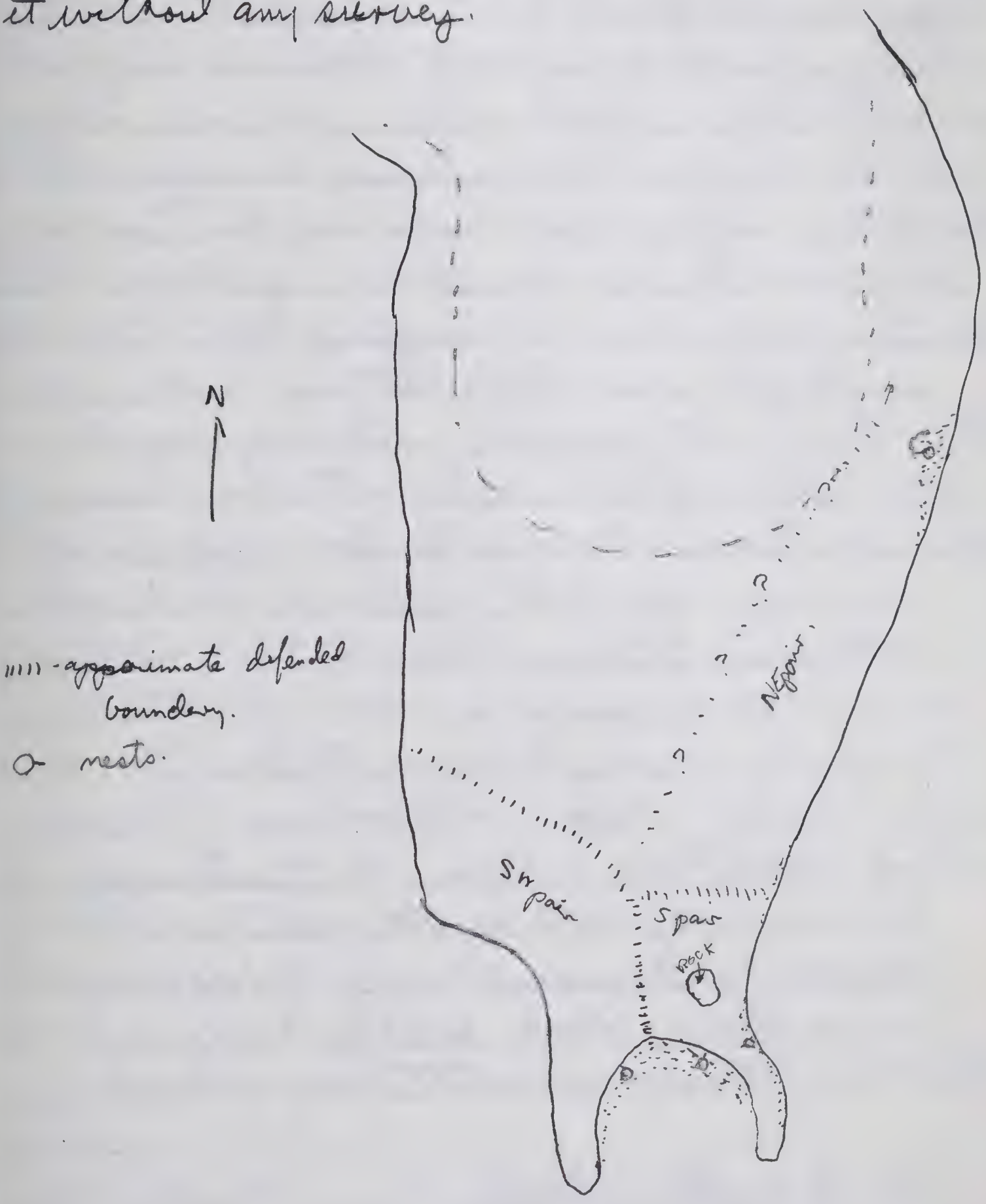
Jewel Lake, 500 ft. Tilden Park, Contra Costa Co., Calif. -
At the lake this afternoon, about 3:30 p.m.
one dark headed but gray-billed bird came
out at about G-12- feeding on Potamogeton
- a moment later it suddenly scrambled under
the surface, using wings and feet to get
through the pondweed - a moment
later an Accipiter (probably large Sharp-shin)
made a pass at where it was and then
moved S down the lake. About 15 to
20 seconds later the coot came up at about
H 12.18 (underwater from about F 11.13), and kept
its body close on the water, its head and
neck pulled in, and its tail vertical but not
with the coverts spread. Several times
it ducked its head and neck under water,
but finally decided it was safe and ceased
to behave that way. For quite a few

7/16 Jewel Lake, 500 ft., Tilden Park, Contra Costa Co., Calif. - minutes after the hawk passed it continued to point its tail skyward, tho it was feeding and swimming around with its head up. After about 10 minutes or so a flecked headed bird came out of the cat-tails and fed at D13. A few minutes later I heard the "pookk" of the ♀ and a moment later B (now bleached to S) with 2 tags came out of the cat-tails at E26. She ducked back in as soon as she saw me, and a short time later I heard a bird spattering from D25 along the cat-tails to B19-20. The mallards worked out of the F27 area shortly afterwards, and when I moved back down the road, I saw two UNM immatures at B18 - both looked to be in about the same plumage stage - the dark gray headed, mottled gray billed stage.

7/23 Lake Temescal, 420 ft., Oakland, Alameda Co., Calif. - I arrived at 2 p.m. - immediately upon arrival saw an adult in the S pair area chase an immature out of the cat-tails on the E side of the rock, through the channel S of the rock. I suspect this was a bird of the S pair, since the pursuit was not hotly pressed. - A short time later, an adult from the SW area drove another adult out of that area, chasing it some distance into the NE area. No defense was made by any bird in this area, nor was even a display indicated. About 2:15 p.m. an S adult was in pair display with 2 birds (at least 1 adult) from the SW area. At least 2 other immatures voiced opinions from nearby

23 Lake Temescal, 420 ft., Oakland, Alameda Co., Calif.

Sketch Map of S end of Lake Temescal as I visualize it without any surveys.



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and for one short period of time most of the birds at the S end of the lake were making some sort of noise. This display was at the NW corner of the S area. As the display broke off, the S adult gave at least 3 crowing notes, and was soon joined by its mate. After the separation all the birds were

Fulica americana

Sept 23 Lake Temescal, 420 ft., Oakland, Alameda Co., Calif. - Diving and feeding in the general area. At 2:25 p.m. I am able to count 17 coots on the lake. At 2:28 p.m. a ♂ from the S pair and a ♂ from the SW pair together, charging about 20 to 30 feet apart along parallel pathes, drove 4 immature birds out of the S end area. This aroused crowing on the part of a NE bird, and one NE bird was seen moving down as if to meet the challenge. A smaller adult, which I take to be the SW ♀ followed her mate, and he turned to meet her and they both came together in a charging position, dipping their bills as they passed and then immediately holding their heads high. In the several succeeding minutes two birds, I believe the SW pair, chased a total of 8 other birds, mostly immatures into the NE area - a moment later one of the NE adults went to work chasing at least 1 immature? out. - Earlier I had an opportunity to watch a coot that a bath. I had not seen this ♀ before, and was not surprised to see it accomplished the same way a duck takes a bath, with much splashing and throwing of water with the wings.

Sept 30 Lake Merritt, Oakland Alameda Co., Calif. - Fed a group of about 8 to 10 coots on the ground by the seats at the duck refuge. Two large birds, both giving the ♂ type call maintained dominance over the flock, only occasionally pecking at one another, but regularly assaulting any other of the smaller birds coming within range. Ducks, especially a ♀ Pintail, blundered about

Oct 30 Lake Merritt, s.l. ♯, Oakland, Alameda Co. Calif. - where these birds were standing, moving the coots out of their way. The coots showed no aggression towards the other ducks, nor did the ducks make aggressive passes at the coots. Feeding them wheat, the coots seemed more agile in getting the grain than the mallards were. Most if not all of the coots in this population seem to be adult birds. I have seen none out of about 40 that had bills in the least bit mottled.

- Throwing grain to a flock of water-fowl, including many Mallards, a few Pintails, 1 Black Brant, a pair of coots came out to join the feeding - both ♀ and ♂ calls being given, characteristically by the small and larger bird. As other coots came into the area to join in the feeding, the two birds ~~of~~ already there tried to keep them away, to the extent that the ♂ was spending most of its time chasing other birds, charging thru masses of ducks on several occasions to attack other coots. Once the ♂ attacked the female while she had her head under water feeding, after severely mauling her she was able to give a sound. And he immediately ceased, she just sat there giving a scolding call with her mouth wide open.

- A few minutes later two birds were in paired display, one on one side of a fence and the other on the other side. I threw grain to the one on the outside, and the

30 Lake Merritt, S. L. Oakland, Alameda Co. Calif.-
several Coots and many ducks come over to the fence,
none went around the end of a 20 foot fence
to get the food. Later a bird did and with
one pitched battle, chased the occupying
bird out onto the open lake. - There are some
social relations existing here that I don't unde-
stand. A few minutes ago I observed a battle
between two unevenly matched birds. They
both displayed and then went into a
prolonged battle, lasting for about three
minutes. The large bird would start to
beat of the small with one foot and
slap it with the other. ~~The~~ Both birds
were sitting on their wings throughout.
The smaller bird, when free of the other
birds grasp, backed away, using its
mostly submerged wings to propell it,
and defending itself with thrashing
feet. The larger bird finally got to rest
of the smaller, and was able to get the small
bird under water, to sit on it and peck
at it. Finally the small bird got away
went a few feet on to surface, and then
under pressure of a charge from the larger,
dived to escape. During the heat of the
battle about 12 other coots (and 2 Calif.
Gulls) gathered close about, intently watching
the struggle. As the vanquished bird
tried to escape, 3 of the bystanders
took after it, even tho the victor was
no longer interested. One of the birds
chased the loser, even charging it twice
causing it to submerge to escape. No

#30 Lake Merritt, E. B. Oakland, Alameda Co., Calif. -
Eaten bird went directly to shore. Of the 30 or
40 birds on the lake, only two drab-billed young
were seen, all the rest seemingly adults, and
many of them apparently paired. At least
they seem to associate in pairs, and several
times I have heard the ♂ "purk" from one of
the pairs, and the ♀ "poonk" from the other.
Twice, when pairs birds were more or less
feeding in close proximity, one attempted
to attack another, even to the extent of display
but the other bird refused to be attacked,
refusing to display or to roar back when the
other did, instead, it just lowered its
head, and keeping its distance from the
pursuer, but facing it, proceeded to
"laugh" at it with its mouth wide open.
A little late, a "poonking" bird was
closely pursuing a large "purking" bird,
once the large bird turned, and the
smaller bird stopped, and looked as tho
it was going to give the "laughing"
reaction, it didn't however. All this
continual struggle around feeding area
doesn't seem to be a function of food
supply. Territory battles are de
rigueur, in fact more so, when no
food is involved. When food is
available the birds are too busy eating
and a considerable number of birds
will collect about the feeding area to
eat. When feeding personnel is gone
then the conflicts become acute.

p30. Lake Temescal, 420 ft, Alameda Co., Calif. -
Once I counted 22 coots on this lake today. Found four structures, 3 of them old nests of which 2 are still functional, and 1 may still be defended. The fourth structure is some sort of a platform that seems to be under construction now. There is a lot of dead material in it but there is also quite a bit of green stuff. The general looseness of the leaves, plus the lack of any excrement further indicates the newness of the structure. About 3 p.m. the 3 pair were seen in counting play, leading finally to the ♂ mounting the ♀ but not copulating. The ♀ was sitting on the shore. Afterwards both birds preened for a short time, the ♀ going onto the water to do it, the ♂ staying on shore. Shortly she was back teasing(?) him, making a barely audible sound, pecking at him, and generally disturbing him. - Later the "laughing" of the ♀ and the "crow" of the ♂ seem to be comparable calls. Several times this afternoon I saw two birds in display positions (tho not displaying) giving these two different calls simultaneously - at least once the proper birds proved to be ♀ + ♂ by the usual call. The birds of the year are proving difficult to distinguish now. Only about two of them have unmistakably gray mottled bills, but several of the ones with ivory bills have noticably paler pied-markings which by their general behavior, I gather are immature birds. About 5 p.m. 2 Cooper Hawks flashed over the lake, the only response from the coots was complete

Sept 30 Lake Temescal, 420 ft., Alameda Co., Calif.

silence. One of the platform structures examined today seemed to consist of an old nest structure with a great of excrement piled on top like mud. One bird was in close, apparently a little concerned over my presence. — A few minutes later a ♀ & ♂ Cooper Hawk flew into a tree about ½ way down the W side of the lake. They seemed to be engaging in some sort of a display — very soon a group of mallards and coots collected in the water nearly, raising a considerable fuss. The ♂ hawk made one pass at the water-fowl, they scattered but quickly collected again. The ♀ hawk crossed the lake, the birds didn't respond, the ♂ crossed the lake, swinging low, and causing about 6 nearby coots to duck under water. Once a coot persistently chased a Ruddy Duck out on the open water, the duck finally dived to escape. — but I haven't seen a coot chasing a mallard yet. I noticed today in connection with display behavior, that the birds flatten the feathers on the top of their head and elevate the neck feathers, giving their necks an expanded appearance, while the depression of the crown feathers accentuates the prominence of the frontal shield — giving them this

sort of a profile.

Iron 149

Pt 1 Jewel Lake, 510 ft., Tilden Park, Contra Costa Co. Calif. - 2 birds on the lake this afternoon. They have been feeding most of the time about D12-14. One is B (snow with solid silver tags) and the other is a young bird with a gray mottled bill, quite light at its base, very dark head, much like an adult, but with a grayish body and wings, quite a bit lighter than the adult color.

Pt 7 Lake Temescal ±20 ft., Alameda Co., Calif. - About 20 coots on the lake today, pretty well scattered all over the area. About noon ± of them were at the N end of the lake, and others scattered randomly. Chasing is still going on some, but it appears that for the most part, the young birds have been pretty well cleared out of the several territorys, and since food is still abundant in non-territorial waters, they are feeding actively in the open waters of the lake. The NE & SE areas are both still being actively defended, and maybe the SW area also. The SE pair are still engaging in quite a bit of courtship activities, at least once I saw one bird mount the other, but the bottom bird sorta rolled under the water, leaving the other (♂?) just sitting there. Once a couple of birds in the NE were participating in what might be courtship play. — The new structure, whatever it may be, in the SE area is somewhat more developed today. Much of the top material is composed of green cattail leaves (of the narrow-leaved form).

Oct 7 Lake Temescal, 420 ft., Alameda Co., Calif. -
There also are some of the dead leaves mixed in but these are few. It is a floating platform, anchored to upright stems. Some of the surrounding cat-tails have been broken down and incorporated into the platform.

Oct 8 Jewel Lake, 510 ft., Contra Costa Co., Calif. - 2 birds on the lake at 2:30 p.m. 1 is a tagged bird, supposedly B, the other is an immature bird, supposedly of the 2nd north brood. This immature bird still has the mottled bill, tho the rest of its plumage is the same as the adults. It has a shiny black head of the adult, and the slate gray plumage of the winter adult.

Oct 15 same locality - 1 bird on the lake, it looks like the unmarked immature, but it is quickly losing all of the immature characters - the bill, its last remaining mark, is almost completely adult in character. A few minutes later I saw two more coots on the lake, the three of them being together. Two were young birds by their obvious bill characters, while the third was tagged presumably B.

Oct 28 same locality There are four coots on the lake today. One is B, two I suspect are immatures, while the fourth is a male note individual showing obvious interest in B (and vice versa). About 1 p.m. the male was seen chasing one of the immatures. It was a short chase, only about ten feet, at F 29. - Upon closer inspection two of the birds on the lake are obviously immatures. The pied bill is not distinct yet.

Oct 29 Jewel Lake, 510 ft., Tilden Park, Contra Costa Co., Calif. — 4 birds on the lake today. They seemed to be feeding in close company part of the time. but most of the time the two adults fed together while the 2 immatures fed together someplace else. They seem to be sticking pretty much at the N end of the lake. Once when a red-tailed hawk approached the area in the course of making wide foraging circles, the three birds visible all worked over to the shelter of the cat-tails. Not hurriedly, but just rapidly enough that they were concealed by the time the hawk was overhead. No sign was observed as a warning.

Oct 31 Univ. Calif. Campus, Berkeley, Alameda Co., Calif. Bird N/O handled today had adult type bill but eye has some greenish flecks around perimeter. P has an eye that I would call adult, no greenish rim to pupil or iris, O/S has an immature eye, with green borders - tho both are quite alike in other characters. S/O has an eye that is adult in character. O/S and P both were etherized to handle. S/O has immature eye pattern - was etherized to handle. Of the 16 birds handled today, at least 4 of them seemed to have adult eyes, that is eyes with solid red iris, absolutely no fleching. Only one of the birds seemed to have really yellow legs., and that bird I didn't record. ~~All of~~ One other has what falls very close to an adult eye, tho not fully

31 Univ. Calif. Campus, Berkeley, Alameda Co., Calif. —
typical of that type. All the rest have
eyes with varying degrees of flecking.
Bill patterns were not closely checked.
4 same locality - After several days of feeding
these birds a commercial food mix
containing wheat, cracked corn and
several other grains, I find that they
clean up everything except the cracked
corn. So far I have not seen any
bird show any interest in trying to
get out of the fenced area. - in fact
it is very seldom that they even get
close to the fence. They seem to like
to be against the wall of the building.
They seem to spend very little time
in the water, but rather wander
around the edge of the pool, on the
dirt, most of the time. All green
grass and herbaceous material has
been cleaned up in the pen, and they
have shown some interest in the
leaves of the Myriophyllum growing
around the pool. The water plants
in the pool were cleaned out in
the first 48 hours. They are active
in the water at night, at least
they were last night, and apparently
they do quite a bit of diving etc
then, clearing large patches of the
bottom of its larger of much.
1 bird, ♂, stays apart from the
rest of the birds for some reason -
I suspect it is not in the best of
health.

Fulica americana

Nov 5 Lake Temescal, 420 ft., Oakland, Alameda Co., Calif.
Watching the ~~large~~ several birds on the lake today I was impressed by several things. First, pursuit takes place above and below the water, disputes of some nature are frequent, I believe they still involve territory tho the limits have changed some due to the lower water level. Also noted today that while the coots were feeding on pondweed, that a baldpate was in close attendance, picking up tidbits the coots dropped. I didn't see any Baldpates trying to rob the coots and only once did I see a coot make a pass at a nearby Baldpate.

Nov 5 - Univ. Calif. Campus, Berkeley, Alameda Co., Calif. -
/S/G at 5:25 p.m., just at duck, was giving a growl note comparable with the growl heard by the supposedly ♀ bird at Jewel Lake while guarding her young. This bird was pursuing and occasionally being pursued by other birds in the water. For about 10 minutes while I watched, most of the birds were in the water, bathing and swimming around. Two or three of them were also seen to be diving and 1 seemed to be swimming under water some. They were generally more active than I have seen them any other time.

Nov. 6 Univ. Calif. Campus, Berkeley, Alameda Co., Calif. - Watched O/W cuddle up to W/O this morning, and gently peck at feathers on the back of W/O. W/O did not respond in any method, but did tolerate the attentions.

Nov 11 same locality - Caught and examined B/S this morning, it has a rather severe reaction to the safety pin, part of it being imbedded in the chest - I pull it out and clamped the one end closed. One tag is badly beaten but still on. This bird also seemed to be doing a lot of stumbling around, consistently turning one foot under. - No sign of primary regrowth of those plucked on S/B.

Nov 12 same locality - This morning watching B/S - saw it seem to nibble on the feathers of G/S some and then go over to W/O and to nibble on the head feathers of this bird. As B/S approached W/O arched its neck, ending up with its bill flush against its chest. B/S ignored the tags and nibbled feathers between and behind the tags but didn't bother the tags. At 8:20 a.m., they were together again, B/S nibbling at the back and neck feathers of W/O, even to the extent of completely burying its bill in the light gray shoulder feathers. A moment later S/B peched at B/S

Nov 12 Univ. Calif. Campus, Berkeley, Alameda Co., Calif.
more or less breaking up the trance.
About 8:24 (B)S found the green plant Myriophyllum in the water and went in after it. Very quickly most of the rest of the birds joined it, quickly consuming the green materials, leaves, stems and roots. As far as I can determine every bird in the lot got some of the green stuff. Once (B)S and Bl/O tangled momentarily, just threatening, no actual blows.
- Caught (G)S tried sexing internally but missed the gonads - sewed it up and released it - covering wound with celloidin (Bailey did the surgery).

Nov 13 same locality - (G)S seems to be in as good shape today as it was yesterday. It weighed 469 gms yesterday before undergoing surgery.

Note: - The 16 coots placed in the SW corner pool of the courtyard in the Life Sciences Building on the University of Calif. were trapped in duck trapping operations at the Gray Lodge State Refuge, near Gridley, Butte Co., Calif., on October 29 and 30, 1949. They were brought to Berkeley in gunny sacks, worked over and released on October 31. Upon turning loose in the caged area their thirst seemed to be the only

Fulica Americana 138

Fulica
1949

note:- University Calif. Campus, Alameda Co., Calif.
detrimental part of the ordeal. They
have all been satisfactorily active
since that date.

Nov 16 Same locality - ~~X~~ killed today, after
being isolated from the other birds for
30 hours (it being the one that was
able to get out of the pen), had a
rectal temperature of 41.5°C at
4:50 p.m. Leg from heel at base
of top of mid-toe nail to inner
end of tarsus metatarsus - 128 mm.
In sexing living birds, the incision
must be made between the ribs
right at the posterior end of the scapula
and care must be taken not to cut
dorsal to the uncinate processes
more than 10 mm or kidney will
be damaged. The best incision
would be in the first intercostal
area just anterior to the anterior
most leg muscle. Actually
the best cut would be ~~between~~ between
the first and second true rib at
the level of the uncinate process.
This bird is a male, with 4
mm testes

Nov 17 Same locality - The bird operated on
Saturday seems to be healing okay, the
skin has a kind of white appearance
around the wound, but it is not
inflamed, at least the temperature
seems to be no higher there than
elsewhere. Caught 1 B/S this morning

Nov 17 Univ. Calif. Campus, Alameda Co., Calif. —
and the inflammation present earlier from the safety pin has now vanished apparently the play in the pin was doing the nasty work. SG has lost both tags so I shall replace them with tag Bl/C (Blue & copper) with the double wire deal thus

to see if it won't hold better than the single style. Of course the staple is still the most irritating kind so the durability of these tags are limited. I also want to see how black and copper look for visibility.

note: — from the bird I directed last night the ♂, the syrinx and cloacal region are preserved in formalin (40%) while the frontal shield and the section where the tag was pierced are fixed in Bouins fix. The safety pin where it went thru the flesh shows no sign of corrosion from body fluids.

— Watching the birds ~~feeding~~ lounging this afternoon after I furnished them a supply of green grass. I noticed one bird carefully picking up grit, quite selectively. On the gizzard of last night's kill I found that the grit

Jan 17 Univ. Calif. Campus Alameda Co. Calif.—
Consisted almost exclusively of quartz material. Most of the particles were about 2-3 m m in size, rounded, while a few pieces up to 5 m m were found. —Two birds ♂♂ + ♀♀ have been infected intravenously with a malaria by Helen Jordan — they are segregated from the rest of the birds — It seems to me that during the two weeks these birds have been here now that they have lost the last indications of an immature bill — looking at them closely now I can see no distinct notching on any bill such as I thought I did 2 weeks ago — but eye color is good, is still holding up. After resting for about 30 minutes — 1:10 p.m. — 1:35 p.m. — suddenly several birds became momentarily active — moving one to feed a little and a couple of them went into the water — I tried some of the grass I put floating in there but didn't seem excited about it as it left. By 1:40 they were all inactive again, most of them lying down, some sleeping, some preening, and some picking at the litter on the ground around them. — Green material in the water seems to be preferred to the same green material out of water. I have noticed that in throwing

Gillespie 949

Fulica americana

Nov 17 Univ Calif. Campus Alamella Co., Calif. - cabbage or lettuce leaves to them that if it is in the water in is cleaned up in a relatively short time. One lot of cabbage leaves were on the ground for 24 hours and hardly touched, but these same leaves thrown in the water lasted about four hours, or less even. - Watching P work over some lawn trimmings, it picked up ~~but seemed~~ a lot of clover leaves and stems but seemed to eat few of them, it more regularly ate the trimmings of grass. The clover was always picked up by the stem so perhaps the bird is not able to distinguish the clover stem from a grass leave until it is handled. Again, the grass in the water is preferred to the same material on land. /B/S arched once this afternoon as VS swam close to it.

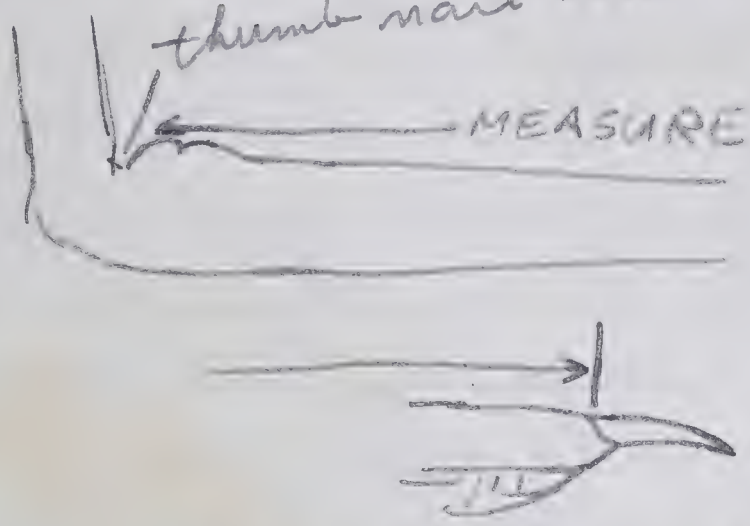
Nov 18 same locality - Tarsus - Mid toe, measured best holding bird upside down between legs, inserting thumb nail at head of tarsus, measure from there to flesh at base of ~~toe~~ mid-toe nail. In determing head of tarsus care must be taken to get nail at the proper position, between the and the lower end of the tibio-fibula.

— see next page —

Illini 749

Fulica americana

Nov 18 Univ. Calif. Campus, Alameda Co., Calif.



Of 19 coots taken on Lake Merritt today, 4 immature birds were released on Lake Temescal at 8:25 p.m. They were tagged R/G, G/G, R/S & G/S. All released at N end of lake. At 8:45 p.m. I released four more birds on the south end of Aquatic Park along the bayshore in Berkeley. These were all red series - R/B, R/B, R/S, R/S.

Nov 19 same locality - 1 new bird R/B. The heaviest bird I have handled, died in the pool last night or early this morning. Dissecting it I found it to be a male, and covered with a terrific load of fat. There was an average of 1/2 inch of fat under the skin over most of its body, and the intestines were tied up by a mass of fat. The testes are 7 mm long, and were first found by going in there the side of the bird. The wing, and area, & spring are preserved. Also the right leg. was saved.

Nov 19 Lake Temescal, 420 ft., Alameda Co., Calif. — All four of the tagged coots released here last night are present today, and mixing with the other birds. They show no sign a irritation nor do any of the other coots show any aggressive tendencys towards these new comers. The four tagged birds are feeding at widely separated parts of the lake, each with a different flock of waterfowl. They show no sign of being strangers on this lake. There is a dead coot on the shore near the east side inlet. The lake is about ten feet below the full level.

— Aquatic Park, Berkeley, Alameda Co., Calif. 3 of the four red series birds released ~~th~~ here last night have been seen — they are R/S, /R/S, & S/R. /R/S was seen nodding with an ~~[illegible]~~ untagged bird.

Nov 23 Univ. Calif. Campus, Alameda Co., Calif. — P. when killed today weighed 423 gms. Also it eliminated a considerable quantity of green fecal material which looks okay. Heel to end of mid toe — 134 mm. This bird, a male, had its left thoracic air sac pretty well loaded with a mold, identified by Dr. Emerson of the Botany Department, as an Aspergillus. He is going to culture the mold to determine its exact nature. A portion of this air

— see page 165 —

Nov 23 Univ. Calif. Campus, Alameda Co., Calif.
sac with the mold in it was placed in Bouins fix for eventual sectioning. Right leg and wing Testes 4 mm. saved and pinned out. — P\G, was sexed internally successfully, then killed — dead weight 429 grams — heel to mid toe 126 mm. Testis - 8 mm long & very narrow. This bird was in good shape with a good supply of fat on its body. Wing, leg, syrinx and cloaca saved. — V\B S — sexed internally satisfactorily — ♀ — then killed. Weight not taken, but wing, leg, cloaca & syrinx saved — also ovary placed in Bouin's fix. Ovary was large, with several follicles of more than 1 mm diameter — was not able to find any good Bursa, but did find a good oviduct — so I saved the oviduct, cloaca and enough meat to get any bursa that might be present. Harry Wesenberg, examining these birds for parasites, found a number of large flukes in the naso pharynx of both P & P\G, also and Acanthocephalid in the gut of P and 3 cestodes in the gut of P\G. V\B S seemed to be free of helminth parasites, at least he didn't report finding any.

Nov 24 Lake Temescal 420 ft. Alameda Co. Calif. — S/G is still on this lake, along with 19 other coots. I was able to get

Nov 24 Lake Temescal, 420 ft., Alameda Co., Calif. — I pair in close enough to photograph them in black & white and color, Both were giving the true sex notes, the smaller the female note, the larger the ♂ note. Having made a loop around the lake I am sure there are no more tagged coots on this lake.

— Lake Merritt, Oakland, Alameda Co., Calif. — Tho hundreds of coots were on this lake, no tagged ones were seen in the refuge area, they could be elsewhere on the lake tho.

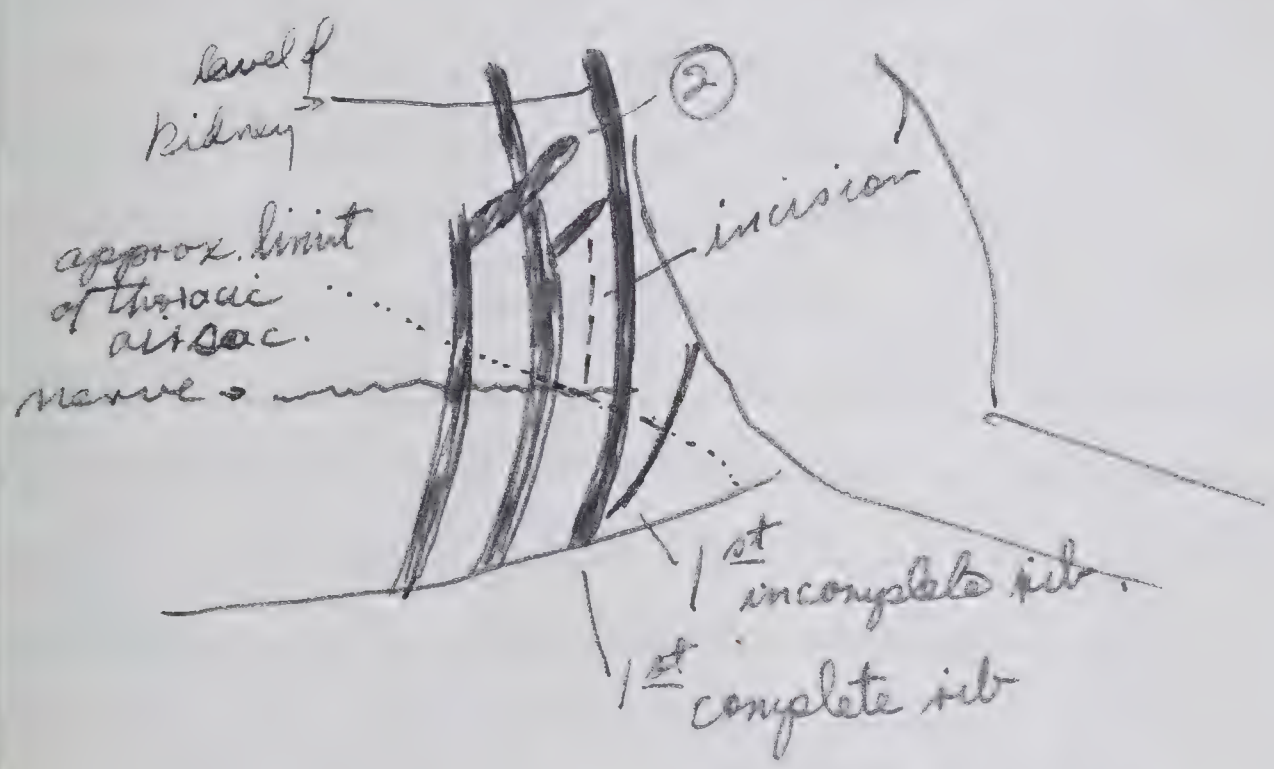
— Aquatic Park, Berkeley, Alameda Co., Calif. Wanted to visit here but the fog was too thick, visibility was about 30 feet.

Nov 25 Univ. Calif Campus, Alameda Co., Calif. — S/B wt 472 gms. Opened this bird, sexed it, a ♂, sewed it up, covered the wound with celloidin & gentian violet, and released it. It secreted a mucous thru the mouth heavily during the whole proceedings and seems to be limping now since being released. W/P — weight 647 grams, sexed internally, a ♂, had to cut wall of air sac to do it, six stitches in skin. Lots of fat on this bird, had to make a large incision and roll it back to work on it. Bleeding only in skin at level of uncinate process. VS/B found drowned in the pool this afternoon. It may have drowned since noon, at least it was still fresh. It proved to be a ♀ with ♂ sized foot. Rt leg, wing, syrinx, ovary & cloaca saved.

Nov 25 Univ. Calif. Campus, Alameda Co., Calif.—
Some fat on this bird, at least it showed no sign of starvation. Its mouth contained a mass like substance, its ~~gizzard~~ crop a great deal of silica material with much green material. It drowned by diving and getting its head & legs thru the wire mesh, there being unable to get its head back out. W/R - weight 444 gms - went into this bird quickly and directly, proved to be a ♀ with large ovary. Sewed it back up with 1 stitch to hold the ribs together and four stitches in the skin. Some fat but not too bad.

Nov 26 Same locality - All three birds seen yesterday are alive and seeming in good shape today. W/P seems to be especially active. While I was watching this bird ~~it~~ jumped up onto one of the catching cages, and then from there to a window sill. A moment later another bird followed. Bl ♂, S/Y ♀, being the two birds infected with malaria, were both dead this morning. Bl ♂ weighs 302 gms and S/Y ♀ weighs 361 grams. S/Y, a ♂ has a 4 mm testes, pointed at both ends narrow. The bird smells like sauerkraut, just a little putrid. Leg, wing, cloaca & syrinx were saved. Also made blood smears from ~~one~~ major Carotid vessels near heart. Found a Trematode in the cardiac area, turned it over to Mrs. Samuels for identification.

Nov 26 Univ. Calif. Campus, Alameda Co., Calif. - $\frac{Bl}{O}$ - ♂ a ♀. wing, leg, syrinx, cloaca & ovary saved. Found another point of surgical technique in sex determination. To prevent cutting into thoracic air sac, cut between 1st & second true



rib, and don't go ventral of the conspicuous nerve running along there. It is safe to go dorsal however to at least the level of the second uncinate process ② and still avoiding the kidney. Incisions between the 2d & 3d true ribs should not be made. - Also made a blood smear from the heart of this bird.

Nov 28 Lake Merritt, Oakland, Alameda Co., Calif. - $\frac{S}{R}$ + $\frac{S}{G}$ were seen on the lake this afternoon. Some of the fellows said they had been here for about a week. $\frac{S}{G}$ also, feeding with $\frac{S}{G}$ in the enclosure. $\frac{S}{R}$ also on the lake

Dec 2. Univ. Calif. Campus, Alameda Co., Calif. $\frac{W}{R}$ weighed 547 grams at noon today. Has plain under wing coverts with only

10/28
29
30
31

34
37

123
36
158

Dec 2 Univ. Calif. Campus Alameda Co. Calif. a very slight light trap, but not at all extensive - its W/P tag removed and replaced with a crimped, double wired copper staple - copper wire W/O/W tag. This bird is to be released on Jewel Lake. S/B had its primaries pulled on Oct. 31, now has 1 primary about ½ out, but still quite well sheathed, and two more just beginning out of an inch long sheath. S/B weighs 470 gms, had a plain under-wing surface, old tag replaced by a new style W/B. W/R - weight 362 gms, tag replaced by W/O/W of the new copper-copper style. This bird is not as fully healed as I could wish it to be. All three birds were released on Jewel Lake at about 6 P.M. This evening.

Dec 3 Jewel Lake, 509 ft. Tilden Park, Contra Costa Co. Calif. At least 10 coots on the lake at 11 a.m. today, including the 3 tagged birds put on last night. Seems to be no evidence of territorial behavior. 1 bird has a safety pin on its neck, but no tags, presumably the B bird. Also one obviously immature bird, by bill character. W/O/W and B/W seem to be feeding pretty much together, while W/B seems to be alone. At 11:08 a.m. W/O/W was "booing" with a unmarked bird while B/W swam nearby.

— over —

Dec 3 Lake Temescal 420 ft., Alameda Co., Calif. - Observing birds from 12 m to 1:15 p.m. saw 19 coots but did not detect any tagged birds. Slight evidence of territory behavior on the part of the birds along shore N of the east side inlet. (see journal p. 203).

- Univ. Calif. Campus Alameda Co., Calif. - VSR - weighs 388 gms. Was sexed, a ♀ and sewn up. The rib stitch was lost ~~of~~ after a skin stitch was in, and it was left out. 3 skin stitches sealed the body well enough tho. This bird is in poor shape - just not feeding properly. —

XW - weighs 520 gms. - proved to be a ♀. Had a little trouble with this bird, apparently got 1 rib too far forward, with the result that I believe the air sac was punctured. The incision actually was quite small. This bird had a fairly heavy layer of fat on it, so is in good shape, was a nasty tempered bird, and had a bad bleeding spell. 1 stitch held the 4 ribs okay, and 3 more stitches seemed to put the skin in good shape.

XP - weighs 431 gms, sexed ♀, very active, had little trouble working on this bird, only had a very small opening, took 1 stitch in ribs, 2 stitches in skin - old tag replaced with VGV. This bird has one bad foot, swollen. These birds seem to be generally suffering

Sullivan 949

Fulica americana

Dec 3 Univ. Calif. Campus, Alameda Co., Calif. — from spending so much time out of the water. A number of them have abnormal formations on their feet.

Dec 5 same locality. — Two birds, $\sqrt{S}^{R}$ & $\frac{W}{O}$ died yesterday. $\sqrt{S}^{R}$ perhaps as a result of surgical shock. Autopsy revealed that no hemorrhages had occurred, that healing was progressing okay, but that the bird was very thin. Wing, leg, ovary, cloaca & syrinx saved. Still quite a bit of fat around the heart but lacking elsewhere. Ovary with several large follicles. $\frac{W}{O}$ - ♂, 6 mm testes, saved, had a very large gall bladder — 22 mm long by about 9 mm in diameter — adjoining tissues all stained by bile pigments — liver, mesentary, intestine, even the wall of the coelomic cavity. Bladder, and adjoining liver & gut saved in Bouins fluid for latter examination. Also found a fluke on the gizzard, fixed it. Saved cloaca, syrinx & testes, also leg & wing. — later — fluke destroyed accidently.

Dec 7 - same locality $\boxed{R}S$ ♀ died today of malaria. Autopsy, revealed an enlarged gall bladder with pigment staining surrounding tissues, a liver with several light lesions on it, and a dark mottled spleen. No evidence of hemorrhages in kidney or other tissues. Ovary with one moderately sized follicle but most of them were undeveloped. Wing, leg, cloaca, syrinx & ovary saved.

Dec 8 Univ. Calif. Campus, Alameda Co. Calif. -
The birds in the pond show a preference for the pond weed present and for grass. But they shy away from the clover that is growing in the courtyard, not eating it apparently until they become desperate for green food.

Dec 9 same locality - [G] wt 413 gms, has the mid pad of each foot badly swollen, feet generally in bad shape legs yellow. [X/W] wt 492 gms, legs and feet in good shape, tag replaced with [G/W]. Both of these birds go to Lake Temescal. Put these about 12:30 p.m.

Lake Merritt Oakland Alameda Co. Calif. -
[S/R] + [S/R] seen close together feeding on lawn with many other coots + Mallards near the NE end of the refuge area. [S/G] and [S/G] were in the fenced enclosure - [S/G] in fact was trapped. Both [S/R] + [S/G] have lost a tag on one side. A little while later, about 3 hours, [S/G] was seen feeding on the lawn near the NE end of the lake, out of the refuge area. 9 coots were taken in the trapping today. I might be an adult but I rather think it is an early season immature. The bill appears to be a little adult like, but the legs are still green. Three birds of the Blue series, [B/R], [B/G] + [B/PG] were released on Stow Lake in Golden Gate

Dec 9 Lake Merritt s. l., Oakland Alameda Co., Calif. - park in San Francisco about 9 p.m. tonight. Y/G is a quite young bird, still having some grayish flecks on its head and neck.

Dec 10 Univ. Calif. Campus, Alameda Co., Calif. - Y/G clipped to be kept to see if gray neck feathers are lost with development of adult plumage. Bl/W tried to sex but failed. It had a layer of fat under the skin that interferred with work a great deal, and then I seemed to have gotten into the air sac, and may have punctured the kidney while trying to punch thru the air sac - at least there seemed to be an extreme amount of bleeding. Sewed the bird up, ribs & skin, and released without having sexed it. W/G - sexed. a male, no fat, good sized testes. Made a small skin incision, made one cut between ribs, had too much bleeding so I moved back to the next posterior area, and made of very small incision to do the job. Didn't put any rib stitches, but did put 3 in the skin. O/G sexed, ♀, some fat, but not much trouble. Only had to take 2 stitches in the skin, none between the ribs. ~~Had a very large, 10+ mm testis. I'm certain it was not an ovary~~. Tho I originally that this was a testis, after doing Bl/W I decided both had ovaries

E AGE 154

Dec 10 Univ. Calif. Campus, Alameda Co., Calif. — which are devoid of follicles. The structure in $\frac{O}{O}$ looked too large + too white for testes, but the lack of follicles fooled me since all others I have done had them. W/Bl was fat, but only took 20 minutes to do. IIII, a ♂, thin, is least likely to survive of the lot. Was quickly done, only took 2 stitches in the skin to sew him up.

Dec 11 Suisun City, Solano Co., Calif. Two birds of yellow series Y/R + Y/Br released on Suisun Slough just S of Suisun City at 9 a.m. today. Later, about 3:30 p.m., returning from the Suisun Refuge on Joice Island I saw 1 tagged bird, Y/R, with an untagged bird on the outskirts of Suisun City. This bird flew as we approached closely, and the tags were plainly visible as the bird flew.

Dec 12 Univ. Calif. Campus, Alameda Co., Calif. O/W weighs 577 grams. Died suddenly from too much ether — preserved in alcohol. S/B weighs 452 grams — primaries are pretty well recovering from being pulled. Under-wing coverts fall in category M_2 - feet seem to be in good condition. L/S weight 469 gms feet in good shape, bird generally okay. Under-wing coverts class M_1, many light gray flecks on breast head + neck w/o gray feathers.

Dec 13 Univ. Calif. Campus, Alameda Co. Calif - ♂ S, weighs 501 grams. Under wing coverts in class M2, bill immature, some gray flecking on breast & belly but none on head or neck, legs green. Reseed ♂/G - it was a male as I originally thought, but I had not actually found the testes the first time, but rather a fold of rectum. This time the testes were really found. Healing had progressed favorably, and I had a little trouble getting in thru some tissues. I may have cut some leg muscle - at least the bird is limping badly. The skin had not healed enough that when the stitches were removed it opened up a little, but the underlying tissues were well healed. B&W tried again, this time from the right side instead of the left where I cut last time. Again I ran into the air sac, but I didn't have to sever bleeding this time. Finally punched a hole in the air sac and found the testes. Lots of fat on this bird and the wound was sprinkled with sulfanilamide so it should do okay. W/B reseed, still a ♀, ovary with many small follicles but no large ones. Was somewhat bloated, and generally not in top-top shape. Had an orange-yellow cheese substance in coelom, and many tissues were loose and puffy.

Dec 13 Univ. Calif. Campus, Alameda Co., Calif.—
Gave it a good dose of sulfanilamide
served it up and released it.
Dec 14 same locality. All the seed birds seem
to be in satisfactory condition this
morning. III is still somewhat puffy
and sluggish but seemingly improved.
W/Bl seems to be okay, and O/G shows
no indication of a limp. Bl/W is not
as active as some of the unused birds,
but I think that all of them are in
condition that will allow survival.
Dec 15 same locality. All the birds seem to
be in good shape. W/G, Bl/W, W/Bl & O/G
will go on Lake Temescal tomorrow
or Saturday but IIII will be kept
until it is in better shape. It is
still some what inflated. A bird
caught last night at Lake Merritt
(A), very thin; tip of its upper
mandible broken so I doubt if it
was able to eat very well. Killed it.
As it died from ether, its last
sign of life was the spreading of
the under tail coverts as in times
of alarm. Wing (R,) and right leg
dried. Testis saved in Bouins—a dark
mode from blood of the kidney region—
greatly enlarged gall bladder, spleen
a deep red, about same color as breast
muscle, slightly mottled, bursa
probed 35 mm, cloaca & syrinx saved
in alcohol. Carcass turned over to
Dr. Kirby for further investigation of

Dec 15 Univ. Calif. Campus, Alameda Co., Calif.
parasites. Another bird [E/S], died at Lake Merritt during the night and was brought in. Both tags gone but band on leg for identification. Had a blue wool thread wound around legs, but apparently not tied there. May have died of starvation, intestines quite empty. A slight fungal (?) infection in wall of ~~sig~~ left thoracic air sac, stretched on a slide & fixed. Blood smear from heart taken, gall bladder loaded - 11 mm diameter by 24 mm long. ♀ with some fair sized follicles. Bursa 30 mm. - cloaca, syrinx, ovary, wing & leg saved. Rest of carcass turned over to Harry Wesenberg for parasites. Aurcles quite distended with blood, liver heart and spleen appear to all be normal color - but a number of gas bubbles seen in ceacum.

- Lake Merritt, Oakland, Alameda Co., Calif. -
S/R & S/G seen in the refuge area at 2:30 p.m. today. Were feeding in same general area, along the area just E of the fenced area. A third bird, in the fenced area - lost both tags, only safety pin still present. I was not able to read the entire band number - but it was my 496-71.. series - and the last number looked like a 0 - the only fully winged bird of that series would be [S/G], from Lake Temescal - being 496-71610.

Dec 16 Univ Calif. Campus, Alameda Co., Calif. —
S/B replaced with V/S - bursa 22 mm. under wing coverts M2, bill decidedly immature, gray tips to belly feathers but not much on breast feathers none on neck feathers. Y/G. - gray tips on crissum, belly, breast & neck feathers, under wing coverts M1, bursa 30 mm. bill very immature - with gray outer portion, eye heavily flecked with green, legs green. S/B - few but not many gray tips on belly feathers, very few white tips on crissum, bursa 15 mm, under wing coverts M2. G/S - under wing coverts M1, legs G, bill definitely immature, gray tips on breast & belly feathers, but not on crissum. bursa 28 mm. O/G - incision on way to healing - under wing coverts M1 light tips on belly feathers, and lower breast feathers, some on crissum. legs yellow-green, bill slightly swollen, bursa 30 mm, weight 523 grams. Bl/W - under wing coverts M1 - some white tips on belly feathers, no white tips on crissum, bill typically immature. bursa 20 mm. weight 493 grams. III - tags replaced with W/W - under wing coverts M1, no white tips on crissum, few white tips on belly, bill not too adult like, but wrinkled as tho down from an inflated condition legs yellow & brown - bursa 10 mm,

5 n'

Fulica 949

Fulica americana

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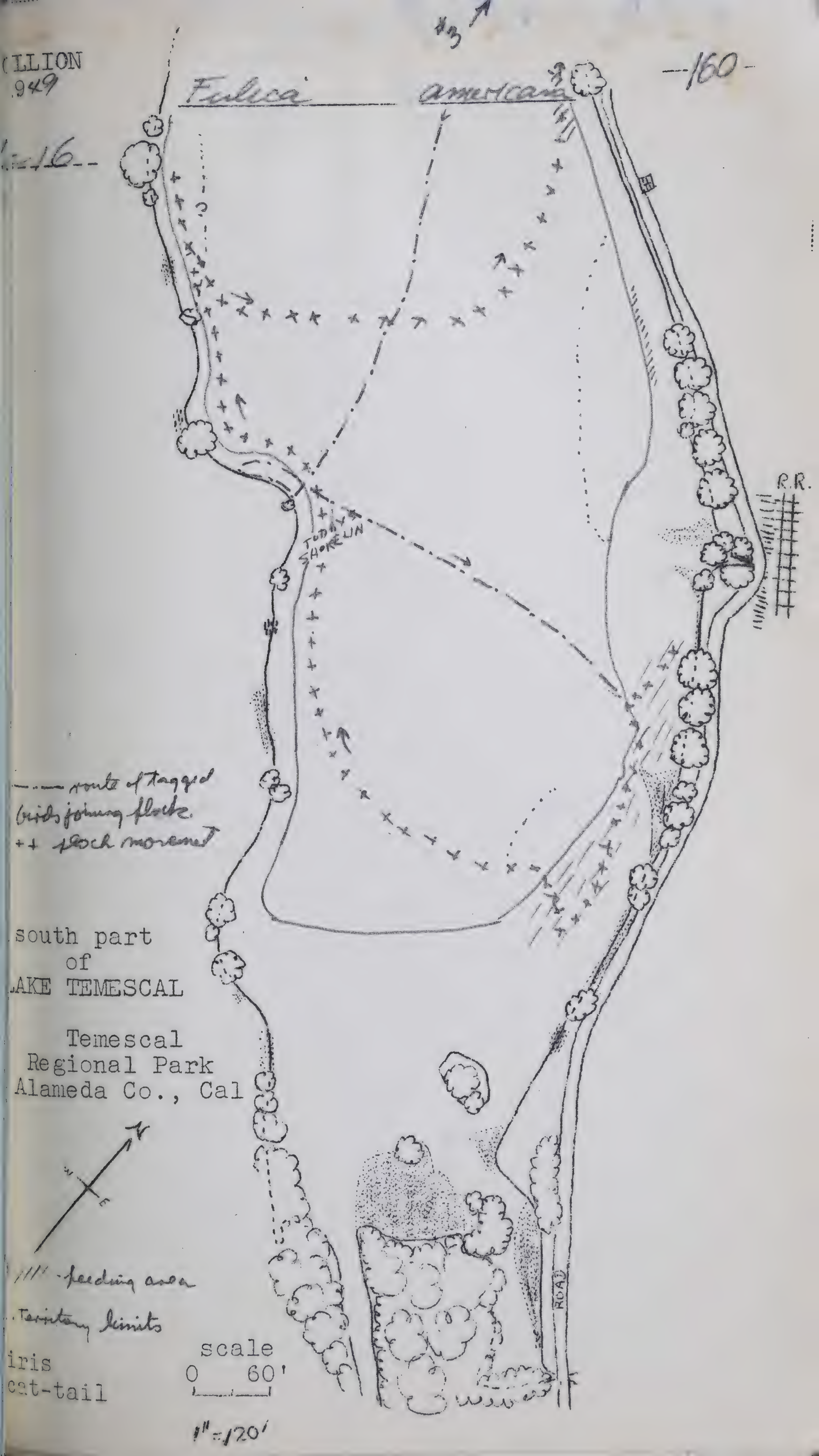
Dec 16 Univ. of Calif. Campus, Alameda Co., Calif. - still somewhat bloated but not badly, weight 417 grams. W/G - replaced by R/G - no light tips on breast or crissum, and very few on belly. bill adult. wing P, bursa 10 mm, weight 520 grams. W/Bl - some few light tipped feathers on belly, no light tipped feathers on crissum, bill immature, legs yellow-green, under wing coverts M_2 - bursa 26 mm. weight 548 grams.

- Lake Temescal 420 ft. Alameda Co., Calif. - 5 birds Tagged O/G, Bl/W, W/O, R/G, W/Bl, of known sex released in the bay at the E end of the dam at 2:45 p.m. Today. Each bird was attached as it was released by the pair holding territory there. All but W/O were able to escape okay but W/O being bloated was no able to dive and took somewhat of a beating. Bl/W, R/G + W/Bl promptly moved over to area F25, where they fed awhile, O/G was at I33 and W/O at D37(?). Quite a gang of coots were feeding at Q20 when I came down, as they were scared out into the water, the birds at F25 came across immediately to join the flock. In the flock were W/Q + Bl/W the 3 newcomers came in to the flock at 3 p.m. without any show of formality, antagonism or any other behavior. Now at 3:10 p.m. the whole lot of tagged and unmarked birds are feeding together on the mud at L12. The other

Fulica americana

Dec 16 Lake Temescal, 420 ft, Alameda Co., Calif. - two tagged birds are apparently still in the N end of the lake. Three pairs are showing territoriality. 1 area includes the area of the swimming stuff, another extends along the E side to the E inlet, and the 3d possible territory covers mud flat edge opposite one cat-tail area. - (see next page). Late 3:45 p.m. - the 18 birds, led by a tagged bird, moved from I 15 to D 31 - these C/G saw them and moved in from D 36, with a territory defending bird close behind, and soon W/W came over from K 35 to join the flock. Again, no social reaction displayed by any birds during the joining. Now 3:50, flock moving directly across the lake. - Parties - about 3:20 p.m. when a Double crested Cormorant came in over the S end of the lake, the flock that was out feeding on the mud at N 14 took fright and fled hurriedly to the water's edge. Apparently, the unfamiliar form of the cormorant scared them.

Dec 17 Jewel Lake, 510 ft., Contra Costa Co., Calif. - Only one tagged bird among the 10-12 coots on the lake. This bird W/W was first seen at N 26 - from where it was chased by B, the bird with the pin only. As it moved S it encountered the antagonism of another bird (p. 162) and was quite vigorously pursued to about G 14 - then a smaller bird (♀?) joined the pursuing bird and these



LLION
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Fulica americana
#3
TODAY SHORELINE
R.R.
ROAD
route of tagged birds joining flock.
++ flock movement
south part
of
LAKE TEMESCAL
Temescal
Regional Park
Alameda Co., Cal
N
W
E
feeding area
territory limits
iris
cat-tail
scale
0 60'
1" = 120'

Last Seasons Nest Sites as evidenced by remains —

Fulica Americana

—161—

ULION
149

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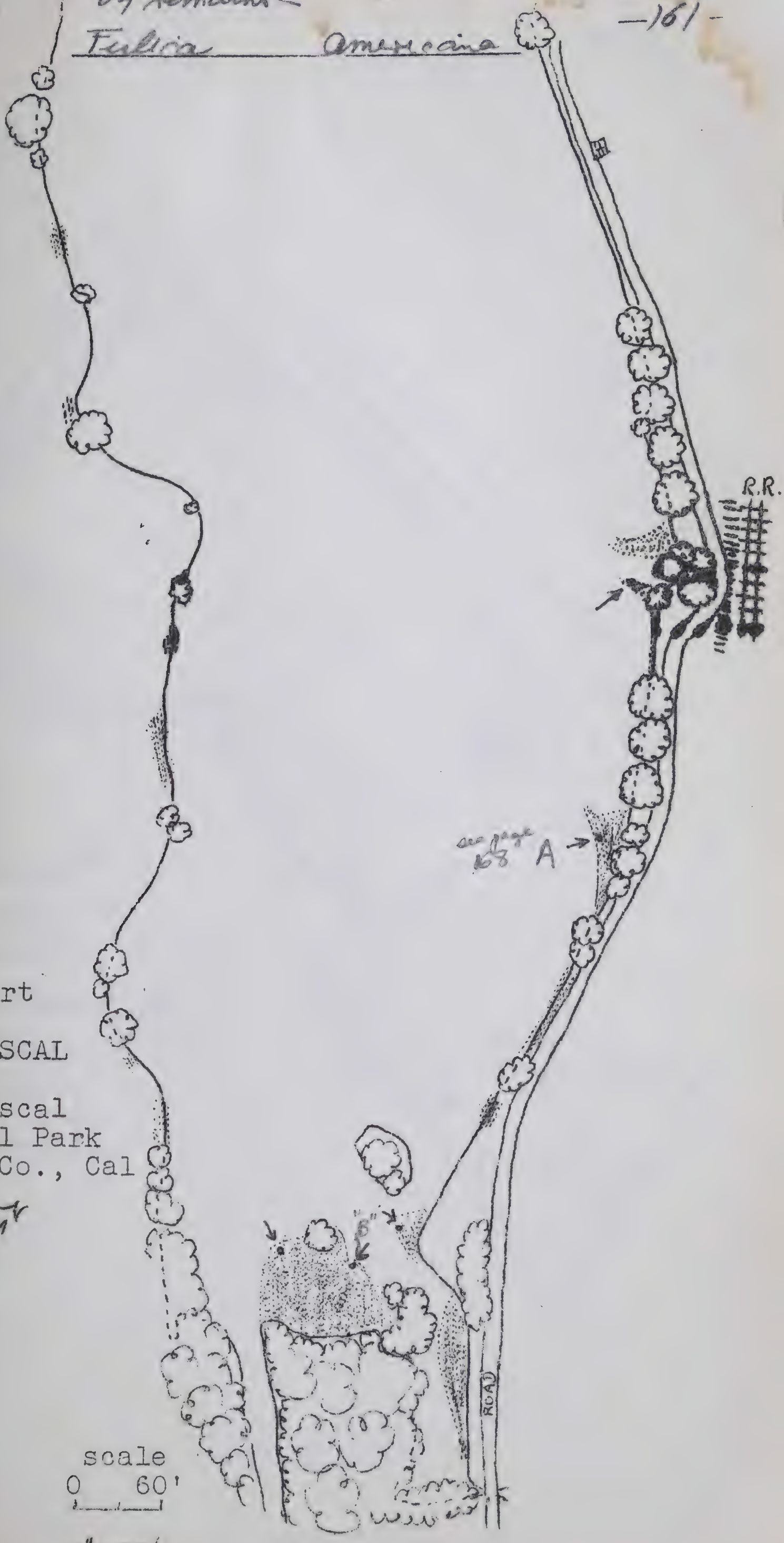

south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
cat-tail

GULLION
1949

Fulica americana

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Dec 17

Dec 17 Jewel Lake, 510 ft., Contra Costa Co., Calif. occurred some nodding (once), she "cackled" and swam about in front of the other bird, teasing? him, then he half chased her half drove her into the cat-tails at C12 from F15 - later low noises were heard in this area, and the tagged bird was ignored as it fed at D12 & D17 to G17. I'd like to know where the other two tagged birds are. I doubt that they left the lake of their own volition.

Dec 21 Golden Gate Park, San Francisco, Calif. - Bird B|LG seen on west end of Stow Lake, bird B|R seen on N side feeding among gulls, between bridge and boathouse. Territory behavior much in evidence. The third bird B|PB, was seen between the small island on the east side of the island in Stow Lake, the area where they were originally released.

Dec 23 Lake Temescal 420 ft., Alameda Co., Calif. - Three tagged birds, Bl|W, W|Bl, R|G, responded quickly to some food thrown out, along with about 18 other coots & 3 mallards, little later O/G came in too. The food was thrown out in the territory of the pair by the gas house, with the result that battles ensued, the male & female notes being given by the defending pair. |G|, was feeding a mouth of E inlet with two other coots. Food thrown out at O34. |G| soon joined the other coots there. At 3 p.m.

Dec 23 Lake Temescal, 420 ft., Alameda Co., Calif. - two non-territorial birds were bowing at M35-, also a few paired displays at M36 between birds not at the ~~gas~~ pump house territory. Bl\W, heard giving the male? call why fleeing ~~pursuit~~. These two birds defending territory have typically swollen adult bills.

Dec 26 Jewel Lake, 510 ft., Contra Costa Co., Calif. - Two tagged coots seen this afternoon on the lake - \G\W and \Bl\W - both by the inlet at the S end.

1950

Jan 4 Univ. Calif. Campus, Alameda Co., Calif. - The fifteen coots from which wings, legs etc were obtained on December 20, 1949, were collected by Archie Mossman, near Rio Vista, Solano Co., Calif., December 19, 1949. Cloacas, syrinx and gonads saved on birds 1 to 5, also on birds 1-5, gall bladders and spleens were examined. Spleen normal on all birds, gall bladders in length 31 mm on 1, 27 mm on 2, punctured on 3, 27 mm on 4, 19 mm on 5. Bird 4 had the left wing missing, with only a stub of the humerus remaining, looked like a 2 or 3 month old wound, end of bone ragged, perhaps shot off, probably not a developmental deficiency. - Two birds, died 12-28-49, and one, Jan 3, ~~1949~~ 1950, of 4 infected with malaria. Bird ◇G S, died 12-28, leg, wing, ♀, cloaca, gonad & syrinx saved. Gall bladder stained

Jan 4 Univ. Calif. Campus, Alameda Co., Calif. — surrounding tissues, liver mottled with black areas in its spleen mottled with dark areas. This bird was our first attempt at sexing, was perfectly healed, though we cut into the air sac while working on it. We were two ribs too far anterior. No indication of reaction to the thread still holding ribs together. some scar tissue but not bad. S\G — died 12-28-49, leg & wing saved. A lead pellet found under the skin on the posterior dorsal surface of the sacrum. Like the preceding bird, this one is full breasted with lots of fat on it. Also lots of fat deposited in mesenteries — ♀, liver badly mottled, spleen very dark mottled, syrinx, ovary, cloaca saved in alcohol. B/S — died 1-3-50, leg & wing saved, ♀, thin, little or no fat, gall bladder large, surrounding tissues stained, liver lightly mottled, spleen dark mottled. Ovary with no large follicles as in the case of the two previous birds, syrinx, ovary and cloaca saved — also a hunk of white hard tissue from the posterior edge of the right lung. looks like a fungus infection

Jan 5 — same locality — The mold taken from P on Nov 23, 1949 (p. 143) has been identified by Dr. Emerson of the Botany Department as of the Aspergillus flavus —

Illinois 750

Jan 5 Univ. Calif Campus, Alameda Co., Calif. - ~~oryzae~~ group.

Jan 10 same locality - The 34 coots brought in over the weekend, and tagged and banded yesterday, are all from Gray Lodge Refuge, Butte Co., Calif. In addition to these birds, ◇8S, infected with a light dose of malaria, was also turned loose with the rest of the flock. In all, 39 birds are in the pen.

Jan 11 same locality - V8C has set up territory & defense in the SE corner of the pen - chasing every bird except 8S out of the area, with some pecking but with considerable vigor. Even when out of the territory area, other birds avoid this one, and it shows some aggressiveness even in the pop. It is also this bird that I have observed moving debris with its bill, searching for insects. The lone mallard in the pen doesn't seem to antagonize the defending bird tho it spends most of it time in the territorial corner.

Jan 13 same locality ◇3S, tagged replaced with 4B|G weighed 402 gms, 28 mm bursa, sex probably ♀, flat shield of class 1. 4G5 - retagged P|O, weight 443 grams, probably ♀ by leg length, shield class 1 F, bursa 25 m.m. No hole where last tag was lost, pin and all are gone. Both this and the preceding bird have

Jan 13 Univ. Calif. Campus. Alameda Co. Calif. - swollen feet. Y/P, being the previously untagged, unbanded bird from Gray Lodge in the area, weighed 552 gms, 15 mm bursa, class 2 W shield with a very wrinkled bill, M_2 under wing coverts, is probably a ♂ by leg length. Y/G - weight, 469 gms, feet somewhat swollen at joints, this was not so with the preceding bird. Shield class 1 F, but slightly wrinkled, bursa - no satisfactory reading. PB/P - weight 520 gms, shield class 3 F, bursa ? mm. Feet without sores, probably ♂ by leg length. At 5:15 p.m. watching my flock of birds, Bl\G and \S\B are defending one corner of the pool. Bl\G giving the male? pukk and \S\B giving an occasional poonk. Feeding on spoiled apple and apple pealings, the Bl\G takes preference but breaks off pieces for his mate. But when he leaves to chase another bird she feeds awhile. Both are taking turns at defending territory. A little while ago, both were in their usual corner under the tree fern, but were not actively defending territory, in fact three or four coots, plus the two mallards, were in their area most of the time.

Jan 14 Lake Temescal, Alameda Co., Calif. - Two nest material samples taken - #1, top of a nest, with much mud and fecal debris present. #2, next lower

Jan 14 Lake Temescal, #20 Pt., Alameda Co., Calif.
layer, probably never in contact with nesting birds. Both samples from nest marked "A" on page 161 - being at position P16.3. 2 pairs on territory, one pair in the NE corner of the lake, by the dam, the other along D from 23 to 29. At the moment few adults seem to be evident on the lake. - Later - most are at the S end, there being 15 there - birds w/Be, w/Be, O, G/R were seen. Sample #3 taken from top of nest which was apparently not heavily used as a brood nest, hence with not much fecal waste on it - nest at J6.3 - position "B" on page 161. Notes two birds showing interest in the area SE of the rocks -, but still not enough water there for real territory rights - one bird was seen cackling at P19 - facing N, but no other bird was closer than D24, where a pair were feeding - this cackling bird could have been one of the pair earlier seen around the Rock. Later, a pair was at NW end of lake, behind the floats, coming out of there, a male call was heard. Apparently 3 of the 7 known Rex birds have been definitely lost - hope the other four hang on.

- Univ. Calif. Campus, Alameda Co., Calif. - This morning I dumped ~~about~~ a little over a half gunny sac of assorted lettuce leaves, onions,

Jan 14 Univ. Calif. Campus, Alameda Co., Calif.—
cauliflower leaves, parsley etc into the pond. By 1 p.m. all except the parsley, cauliflower and beet leaves had been cleaned up. So at about 4:30 p.m. I dumped in another pack full of greens, mostly turnip tops, lettuce and onions. The birds immediately sailed into the food and were busily tearing things ~~about~~ apart. There seems to be a definite pattern of preferences of the foods offered: Swiss chard rates first, then mixed lettuce, especially the white ~~ones~~, veins; onion greens and bulbs; cabbage leaves but not the veins; apples, potatoe peals, carrot tops, cauliflower leaves, the green parts without the veins; beet tops, and lastly parsley. As the last lot a cucumber, ~~and~~ some turnip tops and celery were thrown in but I haven't had time to observe the preference ratings. I also noted today that several birds were picking up plant debris and scratching underneath for insects etc. That seems to be a behavior common to most or all coots. They seem to eat more grain when an abundant greens supply is present, but grain is secondary to the greens. I have noticed a very definite upswing in the amount of fecal

Fulica americana

Jan 14 Univ. Calif. Campus, Alameda Co. Calif. — material in the area, also that it is more solidly formed pellets, bright green whereas previously the feces seemed to all be an yellow olive color, or more properly, a brown ochre. The birds in general seem to be much more active. — Noted \S\G being less violent about territory defense, but once he picked up a stick and carried it about two feet towards S/B before dropping it. A little later he picked up another twig and dropped it into the water. I noticed also that another stick had been dropped in the water nearly sometime previously. He gave two very loud "pukks" a few minutes later while resting upon the E ramp. There was little evidence of territory defense today, but rather pairing behavior

Jan 16 same locality — \S\B — weighed, 456 gms, remaining stubs of cut primaries and secondaries pulled. None of three regenerated primaries are normal, one is nearly full size, but the other two are about ½ size, warped and wavy, very much altered from normal. Leg length 127, shield 2 SS, legs G, under wing coverts M_3, bursa 20 mm.

Jan 17 same locality — Until the last couple of days, two scoops of grain have

Sullivan 1950

Jan 17 Univ. Calif. Campus, Alameda Co., Calif. -
~~Acorn~~ have never been completely cleaned up during the course of 24 hours -- especially grain in the water demanded for three or more days. But since I have started feeding them all the greens they can take, grain consumption has risen so that the two scoops put in last evening, one on land and one in the water, were completely gone by 4:45 p.m. today. No grain anywhere in the area. So I put in ~~the~~ two cans (four scoops) this evening. About all that left of yesterday's greens are the onions and some of the turnip tops. Dumped a half can in this evening, mostly of lettuce leaves. Apparently their hunger for greens is finally satisfied for they are showing very little interest in feeding now. Two birds, O|Br and O|G have lost 1 tag apiece. LB|G seems to have one bad leg. That is the ex-malaria test bird. The whole lot of birds seem to be plenty frisky. 5:15 p.m. - \S|B was in the corner under the perch, with her head down and tail upright in a horizontal plane, making a low "poonk" note with about 2 second pauses between notes. No other bird seemed interested, as she ruffled her feathers and cooed. - \O|G| seems especially aggressive.

Jan 18 Univ. Calif. Campus Alameda Co., Calif. — G\Bl died last night from undetermined causes. In very poor shape, breast in extreme thin condition — blood smear taken of kidney blood, leg, wing, gonad, syrinx, cloaca saved. Spleen normal, body cavity & wall stained by bile perhaps the result of having been dead for awhile. ~~Bill also saved~~ Upper mandible also saved.

Jan 20 same locality. \Bl\G & \S\B counting at 10:10 a.m. — \Bl\G — ♂ came up to ♀ \S\B, she bowed, he bowed, head to head, he started nibbling at the feathers of her head, and occasionally at her bill. When he'd stop a moment she'd start vigorously nibbling at his head feathers until he'd be attentive again. Several other birds were close by, within two or three feet of them, paying no attention. The whole proceeding lasted about 5 minutes, was silent. She drooped one wing, and it quivered some. When they parted, he got aggressive with two nearly birds driving them away, then settled down to turnover litter seeking insects along with at least 3 other birds. \S\B has lost one tag, \Y\R has lost both tags. B/O seems to be limping badly. Jack Parker brought in tags from \O\W — note with tags, (by Leopold)

"Jack Parker — found Sat. Jan 8, 1950. 1/4 mi NE of Jewel Lake. Thinks it

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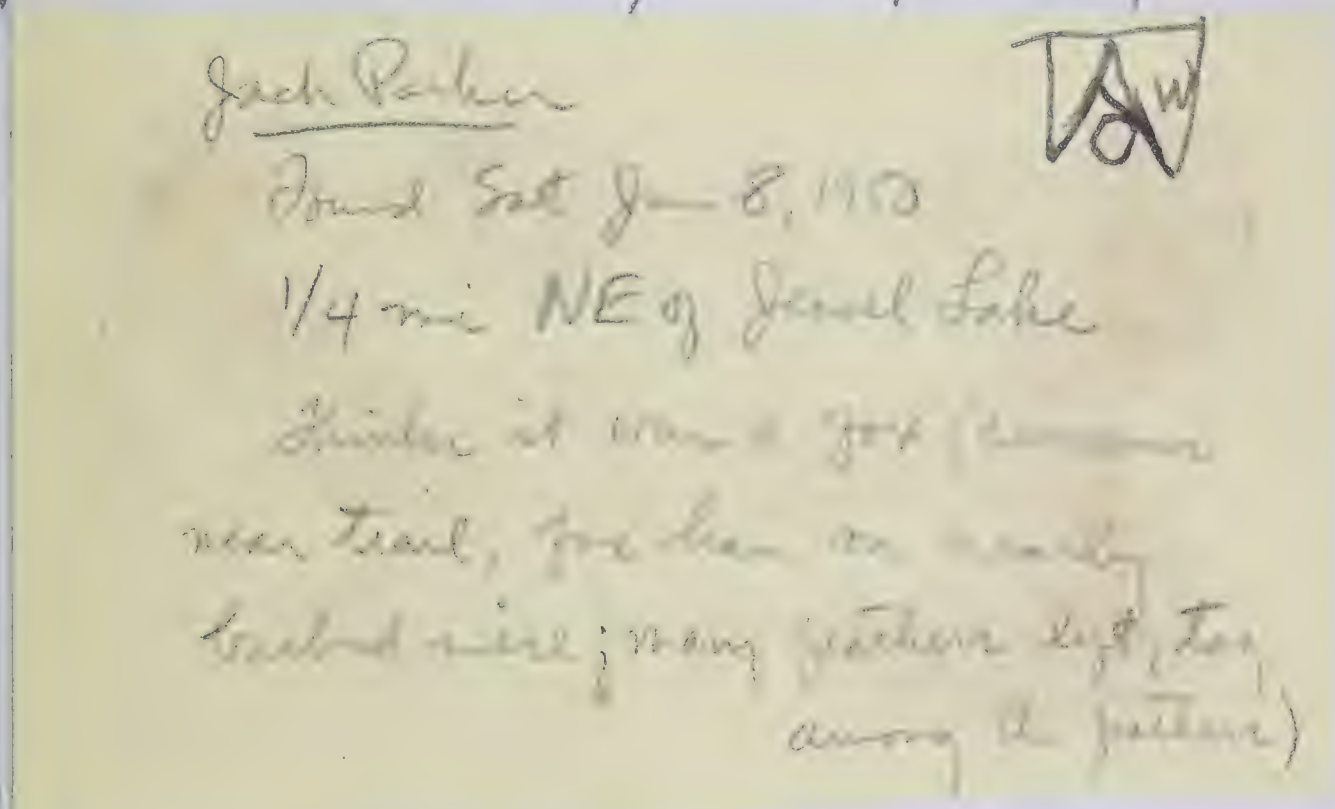
Jan 20 Univ. Calif. Campus, Alameda Co., Calif.
Was a fox (remains near trail; fox hair on nearby barbed wire; many feathers left, tag among the feathers)".



Jan 22 Jewel Lake, 510 ft. Tilden Park, Contra Costa Co., Calif.
Six coots on the lake today, none of them tagged. Am not even sure that I can have seen the B bird with only the safety pin remaining. Territory behavior is not well developed. A couple of instances of possible territoriality were observed (see next page) but on the whole little defense or aggression was noted. The pair (from which both ♂ + ♀ notes have been heard) occupying the S end both have swollen shields, at least one of the two birds in the NW corner seemed to have a swollen shield. Two more birds, both of which have been chased at the NW corner, did not appear to have swollen shields, but this I must check further.

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Fulica americana

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Fulica americana

Jan 22 Jewel Lake, 510 ft., Tilden Park, Contra Costa Co., Calif.
At 12:25 p.m. a momentary conflict occurred at D12. One bird challenged another, the second accepted the challange and churned momentarily, quickly tho another bird charged out of the nearby cat-tails and the second bird hastily moved off towards F12. Notes could not be heard because of the noisy waterfall behind me. 12:27 - another short charge from C13 to D14 chased one of three intruders out aways, now two birds are back to C14 while the defending birds are in the cat-tails: One of the defending birds crossed from D12 to E9, showing no interest in the birds at C14. Now those ~~to~~ two have joined a third at H15. - At least 4 of the 6 birds on the lake have swollen frontal shields, and one definitely lacks it. - One bird apparently lacking the swollen shield, moved around the corner at M25.22, promptly gave the alarm signal with its tail upright, and turned to go to M27 - no bird came out of that corner to pursue it, but one must have been threatening from in the cat-tails. - Later, a bird with a pin was seen at A8 - had a swollen shield - as it moved out it gave a high pitched "puhk" moving out from B7 around to D12 where it joined a "poonking"

Jan 22 Jewel Lake, 5 1/2 Mi. Tilden Park, Contra Costa Co., Calif.
bird. Shortly afterwards it charged and splattered after another bird, driving it to F18. 1:15 p.m. - two birds, one much smaller than the other, crossed from F9 to C10 - neither giving a note - the shield on the smaller bird is flat [illegible] of its larger companion, swollen the larger bird moved on down along the cat-tails, towards C14 - but seemed to have been intercepted tho I am not sure - a momentary conflict occured with splashing - A bird with swollen shield and tail in semi-spread condition - feeding at I5. Now 1:25 p.m. - two pairs active - One pair with pinned bird working out from D12, across to F10 - driving aside a small bird at F10 - another single bird w/ swollen shield (SS) moving around in area D-E 14-15. - another bird w/ SS active in area G-H 4-5. 1:30 p.m., pinned bird at G8 giving a very high pitched "pumch", a vigorous note. A wire is dangling from this pin, if it is a single wire then the bird may be B, if ~~[illegible]~~ double its one of the known-sex birds. Whatever bird it is, it is at least most interested in this Sora as a territory. The way the pin hangs on the bird leads me to suspect it is not B. This bird at 1:55 vigorously chased another bird out from

Jan 22 Jewel Lake, 510 ft., Tilden Park, Contra Costa Co. Calif. C 12.6.

Jan 23 Univ. Calif Campus, Alameda Co. Calif. – Watching the birds today – saw G/C bowing with an untagged bird for a couple of minutes, then moving over a few feet to bow with Bl/W and finally bowing with Y/G. The head nibbling and all were observed. The sex of Bl/W + the pinned bird are unknown, but both G/C + Y/G are assumed ♂♂.

Jan 25 same locality – Y/LB♂ and LB/P♂ busily nibbling at one another this morning. Y/LB♂ seems to be the most insistent nibbler. For a moment Bl♂/O also nibbled at LB/P♂ while Y/LB was nibbling unabated. Now 8:43 a.m. LB/P has moved a couple of feet and is nibbling with W/Bl♂. LG/Br♀ + Br/LB♂ were nibbling; the latter doing most of it. 8:46 – Br/LB♂ bowing with R/Br♀ also W/Bl♂ is a third partner, a pinned bird is bowing with Bl/R. LB/P♂ is now nibbling with G/C♂. For a moment LG/Br♀ nibbled at G/Br♂. Now W is nibbling very insistently at a pinned bird. W/G – surely an adult bird, has a badly battered bill. Bird formerly tagged Br/Y but with no notes based on that tag – retagged P/LG. Bird formerly tagged O/G (94), w/ no known notes based on that tag, retagged O/LB – this is especially appropriate since two other birds are tagged with O/G combinations with considerable similarity. O/Br – lost one tag; both put back on with double copper style –

Sullivan 1950

Jan 25 Univ. Calif. Campus Alameda Co., Calif. — weight of this bird 414 grams, a little drop from last time it was weighed. Weight of Y/G - 517 grams - a gain from the last time it was weighed. And nearly its normal weight. Frontal shield 455 - a recent change - legs becoming Y/G - no longer G - bill is clearing and eyes are somewhat but not heavily flecked - dull gray - brown feathers on head and neck, under wing coverts becoming M2 in place of earlier M1; feet have lost swelling. LG/O - weighed 406 grams - a gain - safety pin nearly torn out on this bird, the both tags, with single copper wire are in good shape. Pin re attached lower on the neck. V/G - weight 548 grams - lost one tag of a double copper pair. Has a big featherless knot on neck where tag is. Frontal shield 455 - under wing covets M2, legs green, eye pretty clouded, bursa .15 mm, leg length 131 mm. The lost tag on this bird had worn thru the copper wire by bouncing around. The wire holding the other tag is well worn in at least four places, but by clamping on the wire, I think this wear will be reduced. Apparently no great change in the frontal shield of this bird. S/B - weighed, 439 grams, one tag gone, pin nearly torn out of skin - will leave it this since these tags are to be replaced with vinylite tags in the near future. Y/R - both tags

Jan 25 Univ. Calif. Campus, Alameda Co., Calif. - found and put on with double copper wire. LG/Br - sexed ♀. estrogen tab placed under skin behind incision. Wound dusted with sulfanilamide. Weight - 464 grams. G/C - weight - 548 grams, sexed ♂, testosterone pellet put under skin (within incision). Punctured air sac going in - testes small, hidden under large intestine had a little trouble finding it, probably about 4 mm long, and at least 2 mm in diameter. Used sulfanilamide on wound. Y/LB - weighs 497 grams - sexed ♂, no trouble, but like the last ♂, testes was fairly small and hard to locate. Powdered insides with sulfanilamide and placed 2 small pellets of testosterone under skin to rear of incision. No fat on any of these three birds. Y/P seems to have left the area, it had the unclipped wings. C/W - weighs 382 grams, sexed - estrogen under skin.

Jan 26 Gray Lodge Refuge, 80 ft. Butte Co. Calif. - watching birds this afternoon, ample evidence of an early stage of territory behavior. No violent encounters noted but 15 or more pairs were on territory, threatening their neighbors some, but apparently not actually attacking them. Many of the birds are sitting on the water in hunching position, or with their tails spread, or both. A great deal of "quacking" heard, also a few "boonks". But the "pinks" must be

Jan 26 Gray Lodge Refuge, Ag. Butte Co. Calif. - initially concerned with territory behavior. The frontal shields seem to be somewhat swollen on every bird exhibiting any real degree of territoriality. 1 instance of paired display, no tangle tho - one later comer from one pair came in cackling. Two birds ganged up on a third as it invaded in close to the center of their territory. - These coots are generally shy and readily fly when closely approached. Many jump into the air from the ground to fly away. Often they drop limply into the cat-tails, at other times flying to water, but seldom in a climbing flight, usually a level or dropping flight after initial take off. Both ♂ & ♀ notes were heard, as well as some cackling. Birds seem paired and on territory along the waterways, but mostly not paired on the larger open pools. All birds defending territory that could be at all closely examined possessed the swollen shield.

Jan 27 same locality - After watching yesterday afternoon and this morning it seems apparent that the coots at Gray Lodge are in the same stage of territoriality that the birds in the Bay area are.

Jan 28 Univ. Calif. Campus, Alameda Co. Calif. - Of the foods offered today, lettuce

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Univ. Calif. Campus, Alameda Co., Calif.
green and purple cabbage, carrot tops and grass, so far only the lettuce has drawn interest. So far the several birds have shown little interest in feeding, they may all be satisfied tho there was very little left of the foods I put in the last time. Even the soft yellow cucumber like squash was cleaned up. All except the rind. The celery stalks and some purple cabbage also remained behind. 16- first of birds taken yesterday at Bay Lodge Refuge - syrinx, cloaca saved in alcohol, caeca, spleen and testis saved in Bouins. Caeca contained a white food mass, undergoing digestion. Huge gizzard 80 x 40 m/m, small cavity of food, about 75% of stomach contents grit. Mrs. Vage has found flukes in syringeal and naso-pharyngeal areas. 17- ♀, with wrinkled frontal shield, found 7 large Monostome flukes in the area dorsal and ventral to the heart. Saved. Syrinx, cloaca in alcohol, ovary in Bouins. Couldn't find a bursa during dissection. Caeca filled with white and green material. This bird, like the former, is in good shape. Full heart and some fat in mesenteries etc. No fat under skin on either bird however. Also a large

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Jan 28 Illinois. Calif. Campus Alameda Co, Calif
guzzard on this bird. Spleen of both birds apparently normal. 18 - ♂, testes put in Bouins, testes small undeveloped. Cloaca, syrinx etc saved. 5 Monostomes found among membranes surrounding pericardial cavity, 1 more among mesenteries in mid-kidney area. Breast full, some fat on skin, some in other parts also. No Trematodes in nasal sinuses of 18. Cestodes found in both 16 & 17. Blood smear made of 17 from heart. Bird 19 - no Trematodes found in body or in nasal area. Gut put aside for Mrs. Voge - usual parts saved, testes in Bouins. Spleen normal, gall bladder big, as is apparently normal, gizzard again huge. Bird 20 - ♂ no Trematodes found. Gut saved for Mrs. Voge. Usual parts saved - testes in Bouins. Large gizzard, large gall bladder. No Cestoda found - don't think into these. Full breasted and fattest of the lot. Had a lead pellet in the flesh just dorsal to cloaca. — Haven't time to do more birds so the rest will have to go into the courtyard pen.

Jan 29 same locality - Noted this morning that the large lettuce still was in the pool, all the grass thrown out had been cleaned up. Also it appears that most of the carrot tops are gone. All the lettuce on the ground seems to be gone.

Fulica americana 183

Fulton 1950

Jan 29 Univ. Calif Campus, Alameda Co. Calif.
Bird 21 - ♂, no trematodes, gut saved for Mrs. Voge. Type of one caeca saved in Bouins. Usual tissues and parts saved, Couldn't find much in the way of a bursa, found one pin sized deal about 10 mm long that might be it, but it was much too small to probe. Big gizzard and gall bladder as apparently is normal. Bird 22 - ♀, no trematodes, gut saved for Mrs. Voge. Bursa large enough to be probed - 22 mm. Usual parts saved. Gizzard and gall bladder large. Bird 23 - ♂, 2 trematodes in nasal sinuses between eyes - also found at least 6 small mites in the tissues directly in the mid-line between the eyes. At least 4 of them preserved in alcohol. No haematodes in body cavity, gut saved for Mrs. Voge. Gizzard normal 80 × 50 m.m, mostly muscle. Bursa present, 30 m.m long. Usual tissues saved. Bird 24 - the leg of this bird, being typical green, is nearest to Ridgway's "Yellowish oil green". ♀, no parasites, usual parts saved. Lots of fat on this animal - couldn't find a definite bursa. Bird 25 - ♂, couldn't find a bursa, usual parts saved, no parasites present. Very fat, fat under skin and throughout the body. Spleen normal, liver with a mottling, piece fixed in Bouins, gizzard and gall bladder normal large.

Jan 29 Univ. Calif. Campus, Alameda Co., Calif. -
Bird 26 - ♂, something black in thoracic air sac, saved in Bouins fix. Fluke in one caeca. Gizzard 70×42×29 mm. Usual structures saved, small bursa present not large enough to probe. Flukes also found in nasal sinuses. Bird 27 - ♂, gizzard 70×45×40 mm. Mrs. Voge found a tick in the head area, otherwise no parasites found in this bird. Neither this nor the preceding bird were as fat as the earlier birds. 26 had a small 1cm diverticulum from the mid-section of the small intestine. Usual parts of 27 saved. Bursa could not be definitely located - if present then it is pin sized and about 10 mm long. - Watching the birds in the courtyard - all the lettuce except a little floating in the water is gone, coots are now busy working on carrot tops (first choice) and cabbage (green) the second choice. The four birds (only 3 seen) having the hormone implants don't seem to be acting any different than normal. BX4 was tugging at some cat-tail for awhile, and then fiddled around picking sticks up.

Jan 30. Same locality - Purple cabbage in courtyard not touched, most of carrot tops, all lettuce, most of apples gone. Some green cabbage left but that is heavily eaten upon.

Allison 1950

Jan 30 Univ. Calif. Campus, Alameda Co., Calif.
Bird 28 - Leg color by Ridgway "Dull yellow-green" ♂ testis in Bouins. Leg, wing, bill, cloaca but not syrinx saved - don't think I'll fool with any more syrinxes. Bursa pin sized, about 15 mm long, white. Frontal shield 755 photographed in black & white. No parasites found in gross examination, gut put aside for Mrs. Vage. Gizzard full, normal, as was gall bladder & spleen.
Bird 29 ♀, sizable bursa. Syrinx not saved, but enlarged as is typical of ♀ syrinx. Found an ulcer near the duodenal pylorus of the gizzard, with 12-20 very small nematodes in it. Tissue discolored and had a rotten smell to it, area about the size of a dime - no flukes in nasal or body cavities. This bird had some fat on the neck area. The earlier bird - 28 - had very little fat on it.
Bird 30 - a fluke found in nasal sinuses, but no other flukes found. Cloaca torn in skinning so that a bursa could not be found. All of usual parts but syrinx saved. testis in Bouins
Bird 31 - ♀, gonad, leg, wing, cloaca, bill saved. Found one fluke in nasal sinus, an ulcer loaded with nematodes in the gizzard, plus another ulcer of undetermined origin. Bursa present and measurable. Laid others

Jan 30 Univ. Calif. Campus, Alameda Co., Calif. — from this lot, the bird is in good physical condition. A large fluke was found in the body cavity near the kidneys. Bird 32-♂, 3 flukes taken from nasal sinuses, found a large ulcer near pylorus loaded with small nematodes. Bird generally in good shape otherwise. Testes in Bouins, leg, wing dried, bill, cloaca in alcohol - bursa present 25 mm long but narrow and white, not large flabby and gray as most are. Bird 33-♂, cloaca, bill saved, wing & leg dried. Testes & syrinx not saved. No ~~Hae~~ Haematodes in nasal sinus or body cavity, but ulcer with nematodes found in gizzard near pylorus. Blood smear taken from subclavian area. Bursa gray, flabby, 38 mm long. Bird 34-♀, cloaca, ovary, bill in alcohol, leg, wing dried, syrinx enlarged as expected. Three flukes found in nasal sinuses, ulcer with nematodes in gizzard. — Although I had not looked specifically for these ulcers in earlier birds I am sure none ~~were~~ were present since I have cleaned each one for future gastronomical purposes, and had they been present I would have found them.

Jan 31 Univ. Calif. Campus, Alameda Co. Calif. — Handling the country bird today, 3 of the four seized birds are in good

Jan 31 Univ. Calif. Campus, Alameda Co. Calif. — shape, but ♀C is badly bloated. Both ♂♂ - LB/Y & ♀C have greatly swollen frontal shields these being the two birds with testosterone implants. Neither of the two ♀♀ show any particular enlargement of the frontal shield from estrogen implants. Both of the ♂♂ previously had flat shields of class 2 or 3. Now both of the shields are swollen larger than is normally seen in the field. LB/G - weight 467 grams, large swelling on foot found filled with a orange liquid and a white cheese like material - into Zenkers. Frontal shield - 7F = / flukes in nasal sinuses, legs almost ♂G, the bird is full breasted with quite a bit of fat on it, apparently in tip-top shape. Carotid gland saved in Zenkers. ♂. Bursa large, white, 35 mm long. A fairly extensive ulcerative area in this birds gizzard, apparently infested with nematodes as in the other. Section of ulcer plus a brain tissue smear put in Zenkers. O/LB - weight 528 grams, knocked out by compressing air sac and then allowed to recover. Put out in courtyard to see how complete recovery is from this treatment. LG/G - weight 411 grams. legs green. ♀, at least, 5 flukes taken from nasal sinuses, 2 from

Sullivan 1950

Fulica americana

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Jan 31 Univ. Calif. Campus, Alameda Co., Calif. — the toracic area — one of these from the membranes covering the heart, the other from the side of the post vena cava at the level of the anterior loop of the intestine. Bl/R — the bird with the primaries gone on one ℓ wing, now has the 7 missing primaries about 3/4 developed. (The previously killed bird was full breasted with a lot of fat on it) This bird in very good condition — had quite coarse gravel in gizzard, also an ulcer with nematodes in the usual location. Both wings, 1 leg saved; cloaca & bill in alcohol, testes in Bouins. These birds that have been in the courtyard seem to ~~be in better physical shape~~ smell less strongly than those fresh from Drayfodge. None of the garlic odor so apparent in those. LG/G — had a large cestode in the gut. Bl/R had a large 32 mm white flabby bursa. — The intestines of Bird 34 — killed yesterday, were not examined for parasites. Bl/W — had at least 2 flukes and 3 mites in nasal sinuses. Mites put with others in alcohol. Very fat, gobs of fat under skin and in intestinal areas, bursa big, white, 40 mm deep. Nematode containing ulcer in normal position. G/Bl — 4 flukes in nasal passages, 1 fluke in membranes near body wall at posterior edge of sternum,

Jan 31 Univ. Calif. Campus, Alameda Co., Calif.
/ nematode in an ulcer in the gizzard in usual place. Usual parts saved. ♂- testes in Bursa. - The intestines of all the birds, except 34, that have been killed in the past 4 days have been worked over for helminth parasites. [redacted] 2 ♂, no flukes found, extensive area of nematode ulcer in gizzard in usual location- testes in Bursa, bursa present but not probed. Usual parts saved. 6 ♀- / fluke in nasal area / in thoracic area, ♀ usual nematode ulcer in gizzard. Usual parts saved. Bursa white long and narrow - 32 mm probed. 1 ♂- 5 flukes on one side in nasal sinuses, 3 flukes in membranes about heart, at least 4 different looking flukes found in mesenteries of gut- these last four look somewhat like the nasal flukes but are white while the nasal ones are orange. Usual nematode infection present. Cloaca, ovary, bill, wing & leg saved. Syrinx enlarged as is typical for ♀♀.
Br/LB - / fluke found in body cavity just anterior to testis. Some dark deals in proventriculus, whole structure quite vascular- the worms fixed in Zenkers. Nematode ulcer in usual place. Gut saved for further exam. Bursa very slender, broken in removal figured to be about 25 mm long. Old tag on 5/B replaced with newest

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Jan 31 Univ. Calif. Campus, Alameda Co., Calif. -
style vinylite tags.

Feb 1 same locality - Bl/o - frontal shield
class 8SS, probably a ♀ so'd want to
sex this bird and make a testosterone
implant. It is a ♀, a testosterone pellet
was placed under the skin to the rear of
the incision. Normal ovary with follicles
up to about 2 mm in diameter. Legs green
slightly on the yellow side; no brown
on upper leg. R/Br weight 469 grams.
no parasites found in this animal,
not even the usual nematodes in
the gizzard. Bursa large, 32 mm,
white flabby. 3 cestodes in intestine.
Heavy layer of fat under skin. X/Bl-
♂, heavy layer of fat under skin, no
flukes found, no nematodes in gizzard,
bursa pin like, but 25 mm long.
Syrinx small as typical with males.
about 2 mm in diameter. Heavy fat
throughout body. Bl/G - ♀, no fat
under skin, not in as prime condition
as the last two. 7 flukes taken from
nasal passages, ulcer with nematodes,
1 fluke from syringeal area, syrinx
6 mm in diameter, bursa small,
pin like, 22 mm long. Bl/W - ♂,
heavy layer of fat under skin, bursa
gray, flabby 28 mm long, no flukes
but usual nematode ulcer. Testis
of this and X/Bl not saved. Syrinx
3 mm. lateral or longest diameter. Testis
small. Leg, wing, Cloaca, bill saved.

Sullivan 950

Fulica americana

Feb 1 Univ. Calif Campus, Alameda Co., Calif.
R/C, ♂, no flukes or nematodes. Syrinx in Bovins, leg, wing, cloaca + bill saved. Fat layer under skin, in generally good shape. O/Bl, weight 518 grams, ♂, 1 fluke in nasal area, 2 in ~~area~~ syringeal area, nematode ulcer in gizzard. Bursa white flabby, 42 mm long. Syrinx small. Fat under skin and lots of fat around intestines. O/B - weight - 491 grams, 1 ~~k~~ fluke in nasal area, many (25-30) mites in nasal passages, no flukes in body cavity, nematode ulcer present in usual place. Syrinx small as for males. Guts saved for parasite examination, testis not saved, cloaca saved, narrow pin like 32 mm long. All the nematode ulcers are alike, a blood colored "scab" of the gizzard lining with little reddish worm burrows radiating out from it, generally about 20 mm from the pyloris. Often the ulcers are 10 mm or more across, with the bulk of the worms under the "scab". A few are out in the burrows working in the mucosa, and these are particularly difficult to remove.

Feb 2 Same locality - G/O - weight 463 after being without food or water for nearly 24 hours. Frontal shield 455, bursa 26 mm, gray, flabby, 3 flukes in nasal passages. Nematode

Allison 1950

Fulica americana

Feb 2 Univ. Calif. Campus, Alameda Co., Calif. - ulcer in the usual ~~location~~ location in the gizzard. P/Y - weight after 24 hours w/o food or water - 459 grams. 1 fluke in nasal sinuses, usual nematode ulcer in gizzard, bursa 22 mm. but pin like. Oviduct large, a section saved in Bouins. Both this and the earlier bird were very fat. A blood smear was made from G/O - the blood being from the cut wing stump. Ovary from P/Y saved in Bouins. G/LS - weight 512 grams. Bursa, gray, ~~narrow~~ 32 mm long. 2 flukes from nasal sinus. ~~Some nematodes~~ Presence or absence of nematode ulcers not definitely determined, but I think ~~one~~ one was present. LG/O - weight 381 grams, 1 fluke in nasal sinus, 5 in membranes about heart, usual nematode ulcers in gizzard. Bursa pin like, 22 mm long, white and slender. ♀, ovary not saved. P/Y - ♀, 4 flukes in nasal cavities, 1 in the heart region. Ulcer with nematodes in gizzard. This bird, as all those killed today, was in good shape with lots of fat on it. As with all the birds from the courtyard the gizzard was smaller than the birds fresh from Bray Lodge. Gizzard on P/Y measured 50 × 35 × 22 mm. S/O - frontal shield 755.

Feb 2 Univ Calif Campus, Alameda Co., Calif. -
Y/G - a 1055 frontal shield.
P/O - green legs, 1SS frontal shield.
V/BG - frontal shield 955. Y/LB - frontal shield now nearest to class 3. swelling is mostly at rear of shield with quite an area of new looking, fresh red coloring, legs green. This bird has become exceedingly nasty tempered. X/W - shows no change, frontal shield does not seem to be swollen or affected, legs green. Shield about class 1.
LG/Bo - shield class 10 - may be slightly swollen on posterior portion. Legs green. X/C - frontal shield shape of class 10 but 12 x 14 mm a truly swollen shield in all respects. A good deal of fresh color in it. I tried puncturing this bird in several positions to deflat it some but was not particularly successful. I'm afraid it will succumb to the bloated condition.

Feb 3 same locality - Bird 35 - ♀, killed because it lacked a frontal shield. Syrinx unlabeled in alcohol, bill & bursa in alcohol, leg & wing dried, ovary in Bouin's. No examination made for parasites. Large flabby oviduct, bursa small, 22 mm long but about the diameter of the probe, otherwords, pin sized. This bird had no fat on it. Apparently the last week of

Feb 3 Univ. Calif. Campus, Alameda Co., Calif. - confinement took all the fat off all of these birds since they are all very ~~little~~ light. Bird 36 - accidently killed with ether. ♀, leg, wing, bill, bursa saved, bursa large, gray flabby, 30 mm long. This bird was shinny like the preceding one. No examination made for parasites.

— Lake Temescal, 420 ft, Alameda Co., Calif. - At least 3 of the known sex birds are apparently still present. W/Bl & O/G are still there, and another bird that has lost its tag, pin and all, is staying close to W/Bl. Five unclipped, unsexed birds released about 1 p.m. 3 of them immediately flew to the S end of the lake, while the other two remained near the dam. The two birds having territory there made several charges at these birds, but just when they'd get close enough to peck, they'd see the tags and veer off. After about five minutes they were still staying close by the intruders but had not yet pressed home an attack. Two of the other tagged birds immediately joined a flock of untagged birds ~~are~~ and started feeding on grass out of the water. At least 3 pairs are defending territory and maybe more are. Defense is active and encompassing sizable areas. Each of the birds defending territory has a swollen

Feb 3 Lake Temescal 420 ft., Alameda Co., Calif. — frontal shield. No other bird has been observed yet today having this. R/G with 12 birds, including O/G, w/Be and the lost tag bird at D35, swimming N to be met by the pair defending the O area. All of these tagged birds have lost the swollen character of their frontal shields since having been put on this lake. Most of all of their ~~feet~~ shields now look flat or perhaps slightly swollen.

— Lake Merritt, Oakland, Alameda Co., Calif. — Bird 496-71648 - released at Suisun City, Solano Co., Calif. December 11, 1949, was seen in the fenced area today. It has lost both tags, but the copper wires and pin are still in place. 496-71610 - from Lake Temescal is in the fenced area. Watching it, I saw it pick up pigeon and gull feces. 496-71628 - also from Lake Temescal is in the fenced area. A very old looking bird with reddish yellow legs, a very roundly swollen frontal shield carried a band, probably size 7, on which the numbers 600861 could be distinguished. No series number was seen although that part of the band could be clearly seen and did not seem unduly worn. O/G, from Lake Temescal, seen on the water on the west edge of the refuge.

Feb 4 Davis Calif. Campus, Alameda Co., Calif. — A dead crayfish (brown) into the east area several days ago still

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Feb 4 Univ. Calif. Campus, Alameda Co., Calif. — seems unmolested. G/C & Y/G both apparently males, are bowing to one another, and Y/G is nibbling around the dangles of G/C. Despite lettuce, spinach, grass and chick-weed(?), all fresh, in the water, the birds prefer to pick over the weeks old carrot tops etc. Some green cabbage and all of the purple cabbage seems to remain unmolested. Having laid out lettuce, carrot tops, beet tops, spinach, grass(spp?) and chick-weed(?) in separate piles, the carrots tops seem to be attacking the most attention, tho lettuce ranks a close second, spinach is third. The grass and chickweed have only been sampled by one or two birds, the beet tops haven't even been peched at. Y/LB was carrying sticks, also went through a fast but vigorously "billing" episode with P/O. For the most part these birds are too full and satisfied to do much feeding. Of course that condition will give a clue to their preferences, since a hungry lot would show little preference until nearly satisfied. All their feeding has been on the ground. They have shown no interest in the food floating in the water. Y/LB has become aggressive

Feb 4 Univ. Calif. Campus, Alameda Co., Calif. - with other birds, having in the past minute routed both LB|G and G|C from a favored spot. Also Y|LB just packed another stick to the same place, a pool of standing water. Y|G and LB|G are now bowing and bill nibbling. LB|G has its head under Y|G's breast while the latter nibbles. Now G|C + LB|G are nibbling at one another, with bowing etc.

Feb 6 Stow Lake, Golden Gate Park, San Francisco, Calif. One pinned bird seen on west side island, near position where a pinned bird was seen earlier. Two birds were seen together, one crowing, the other cackling, I couldn't determine which was doing what, but one of the birds had a frontal shield fully as swollen as the bird given testosterone on the campus. There seems to be some territory defense going on here, tho most of it is barely from what I would term suitable territory since there is no emergent vegetation concerned. Several pairs have small areas "blocked" off, are bowing to another and nibbling. 1 B|PB seen feeding with several other birds on grass and picking up grit from the walks NE of the island. Both tags still on this bird. A third once tagged bird with only the scar left was feeding in the

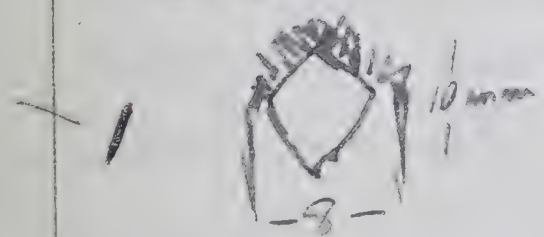
Feb 6. Stow Lake, Golden Gate Park, San Francisco, Calif. area with B|PB. This bird ~~is~~ banded & can't get a good enough look at the band ~~to~~ tell what number it is..

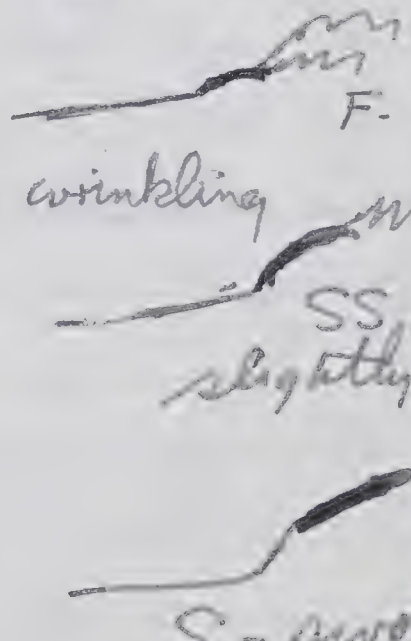
- Lake Merritt, Alameda Co. Calif. - 496-71610, 496-71624 + 496-71648 all seen in the fenced area today, as well as S/E.

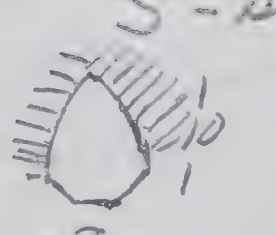
- Lake Temescal, 420 ft., Alameda Co. Calif. - ~~R~~ G, O/G, O/W plus the lost tag bird were all seen, all but O/W together at 42. None of the five tagged birds released last week were seen and I doubt that they are here.

Feb 7 Univ. Calif. Campus, Alameda Co. Calif. - Shell classes and conditions -

class. condition







class 11
see p. 202
-12 - 15

class 12
p. 409

Feb 7 Univ. Calif. Campus, Alameda Co., Calif. — [illegible] walked directly up to [illegible] bowed and then started to nibble at her breast feathers, she turned away, ignoring the gesture. A moment later [illegible] & [illegible] were bowing and billing. [illegible] & [illegible] are both tugging at sticks and pulling litter around. For the most part these birds are quite still and inactive, they seem content to just sit and preen or nap. Once in a while they saunter over to peck at some greens. [illegible] is still alive, looks as tho he may be in better condition than earlier.

— Aquatic Park, Berkeley, Alameda Co., Calif. — One bird with tags gone but pin and dangling copper wires still on the pond, seen in the "Duck Refuge" area with about 10 other birds. Neither of the birds released here the other day were seen today. In all, 103 coots were counted on the pond, about half of what have been seen here previously this winter.

Feb 8 Univ. Calif. Campus Alameda Co., Calif. — Discovered today that two birds have worn tags [illegible] — one bird from Oct 31 to Nov. 26, the other from early January to Jan. 31. An oversight on my part. [illegible] — being the ♀ with the testosterone pellet, at noon today seems quite concerned about a piece of cat-tail leaf she has in the corner of the courtyard.

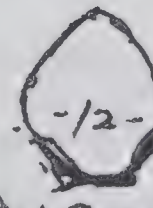
Fulica americana

Feb 8 Ulmis, Calif. Campus Alameda Co., Calif. - Also S/W was noted making aggressive passes at V6 and chasing P10 some distance.

Feb. 9 Jewel Lake, 510 ft., Tilden Park, Contra Costa Co., Calif. There are apparently 6 coots here today. One bird defending the N area has a pair only, looks like the same bird that was in the S portion the last time I was here. Examination of the cat-tails in the area ABC 11 to 16 revealed no sign of a definite platform or structure made by a coot. One deal at in A14 could possibly be a coot structure but I don't it. While wading and searching a pair of coots remained on the open water nearby, showing a little concern but making no demonstration. Just now one bird was heard crowing while an accompanying bird was giving a "pouk" note! The pinned bird in the N area was heard giving a low and a high note, but both with a nasal quality. Incidently, the crowing just heard was by a bird lately moved from near D14 to E25. Three birds came back along the east side to C17, where upon the 3 turned upon the 3rd bird and drove it away. The pinned bird is moving across from L21 to K27 chasing another coot, but causing a pair of mallards and a golden-eye some concern. While two red-tail hawks soared overhead, two Ruddy

Feb 9 Jewel Lake, 510 ft., Tilden Park, Contra Costa Co., Calif. — Ducks showed a great deal of concern but the coots gave none. Once the two birds of the 5 pair were seen billing and bowing and nibbling near H14. I cooked over the area M-O 24-25 and L-M-N 21, 22, 23 looking for any sign of a platform constructed by coots but found no definite evidence. Several rafts of material were seen, all evidently of natural origin, some showing signs of animal use but no evidence of construction activity. While I was working in the north end all the coots moved down to the S end. Several instances of combat were observed, mostly charging but once a display was given. A bird that I believe to be a male charged one bird, but did not hotly press the attack, rather displaying, immediately its mate came out from F9, crossed to C11, passing close to but ignoring the displaying bird and attached one of two birds behind the cat-tails there, driving it out to E12. Territory defence is progressing but not very strictly. I have seen no evidence of aggressiveness against anything but coots. Some times the ducks are in the way and have to hurry to keep from being trampled, but I have not yet seen a duck attacked directly.

Feb 11 Univ. Calif. Campus, Alameda Co., Calif. — X16 swam directly up to 104, bowed, and

Feb 11 Univ. Calif. Campus, Alameda Co. Calif.
put its head under the latter's chest. They remained in that position for about one minute, with O/G making occasional pecks at Y/G's head. None of the other birds seemed to be concerned with these doings. W and LG/Br seem to be in conflict, with W chasing the latter - also C seems to be in general disagreement with several other birds. Both Bl/P and Y/R examined today. No sign of prolactin pellet left, but I believe the frontal shields on both birds are enlarged somewhat. Tho both were in the SS ~~class~~ condition when emplanted, now they are both in a moderate S condition. No evident elargement of the colored area yet. Bl/O - weight 437 grams, frontal shield now 6 S up from 8 SS in 11 days. Legs ~~yellow~~ green. LBl/G - weight 553 grams, frontal shield 3 SS, legs green. Y/LB - weight 544 grams, frontal shield very large, a new class 11 being 12 × 15 mm.  Of course the shield is very swollen. W/B - weight 417 grams, frontal shield 2 SS. Y/G, weight 540 grams, legs YG, shield 10 SS. LC/Br, weight 466 grams, legs YG, shield 10 SS. O/G - weight 557 grams, legs YG, shield 6 S. Legs almost yellow on this bird. P/O - weight 438 grams.

Fulica americana

Feb. 11 Univ. Calif. Campus, Alameda Co. Calif. - shield 1 SS, legs yellow green. ♂ w - weight 378 grams, legs green frontal shield 7 F. ♀ C weight 601 grams, legs YG, shield 11 S. The shield on this bird is very large, more of the shape of class 9, but the size of class 11.

- Aquatic Park, Berkeley, Alameda Co., Calif. 103 coots counted on the lake, one pinned bird seen but no tagged birds seen. I believe I saw every coot on the lake and examined it with binoculars.

Feb. 15 - Univ. Calif. Campus, Alameda Co., Calif. - LB/P died during the morning in the pen. It was alive but weak at 8 a.m., dead and cold at 11:30 a.m. Placed several foods before them. Some mushrooms, leaves of indian tobacco, Rumex poison hemlock, chickweed and grass cuttings. Of the chickweed, mushroom and "tobacco" on the ground only the chickweed was taken. Of the hemlock, tobacco, chickweed and grass toss mingo in the water the grass was taken most readily, but some chickweed was also taken. One bird picked in an exploratory manner at a mushroom but didn't think it ate any. ♀C is limping badly. Not sure what the trouble is. Yet seems very reluctant to move

Feb 15 Univ. Calif. Campus, Alameda Co., Calif. —
Bl G - tried some mushroom, it pecked some off the stem and I believe swallowed it. W Bl wandered over to G/C, resting on some grass about 10 feet from the SE corner. They set about doing some billing, almostly immediately Bl G came running over to attack G/C and chase him away from W B. After G/C limped on Bl G indicated no further interest in him. Bird LB/P - died today, has YG legs, frontal shield 7F, adrenal about 5 times normal size, both adrenals saved in Bouin's Fix. Testes small. 4 flukes taken from nasal passages, 5 flukes taken from thoracic area, 3 of them from around the syrinx and 1 each from a cavity by the head of the ~~femur~~ humerus. Gizzard contained a very extensive area worked over by nematodes, with nematodes being found throughout, a ~~small normal~~ area about 5 mm across indicated the long time presence of a normal sized ulcer, but they had spread from there, to cover about 70% of the stomach lining. throughout the lining was separated from the mucosa and the characteristic hemorrhages were present throughout. The whole bird and especially the gizzard had a particularly rotten odor. Forepart of body in alcohol.

Fulica americana

Feb 15 Univ. Calif. Campus, Alameda Co., Calif. — cloaca with ~~ot~~ thin bursa and bill saved in alcohol. Wing and leg dried. Remainder of carcass to be turned over to Mrs. Voge. A blood smear was taken from the subclavian vein, also two lice, one large and one small were taken from the head and placed in alcohol. The gut of this bird was full of white stuff, not the normal color, and the gizzard contained no food tho food was and has been constantly available to these birds. The spleen was darkly discolored in at least to extensive areas, and was quite notably enlarged.

Feb 16 same locality — 3 B was persistently chasing another bird this morning. Of the two "poonk" like notes of the female, apparently the high one is a plaintive note, denoting fear or uncertainty, whereas the lower note is an aggressive note, indicating positive action generally of an aggressive nature. Of the foods put in the courtyard yesterday, the grass is pretty well cleaned up and the "tobacco" stuff ~~is~~ has ~~pe~~ been peched at at least a few leaves have been torn some while most of the leaves have not been touched. The poison hemlock and mushroom show no signs of being fed upon.

Feb 23 Univ. Calif. Campus, Alameda Co., Calif.
W - was seen in a display this morning about 7:55 a.m. She climbed up on a pile of cat-tails on the edge of the pool and stopped on the top, lowered her head, spread her under tail coverts and gave a low, barely audible "tuk-tuk, tuk" note. B♀ indicated some interest, started over to her, but did not actually approach her. She then moved over against the wall under the tree fern and repeated the display, but again no reciprocation was observed on the part of any nearby males. B♂ is vigorously defending that corner of the court against Y/LB and G/C, chasing them every time they come into the area. These both are birds with swollen shields. So far he has shown no aggressive behavior towards any of the other males that are probably present O/G and probably Y/G.

Feb 24 same locality - W/LB displaying again this morning, from about 7:40 to 7:48 a.m. She started on the pile of cat-tails on the edge of the pool and then moved over to the edge of the building under the tree fern where she continued. No other bird was noticed paying any

Fet 24 Univ. Calif. Campus, Alameda Co. Calif. — attention to her. Her shield doesn't seem to be especially swollen, tho I can't be sure from here. \Bl\G/ is getting pretty hot in his pursuit of Y/LB, chasing him out of the area twice with considerable vigor. \G/C seems to just plain desire to stay near the pen out of the area defended by \Bl\G/. \C/W was moving a cat-tail around, but no other bird has shown any tendency to display. \C/W, \O\G/, O\Bl, Y/G, O/P and UNM bird are all tolerated. Now Y/LB is also in the area. O\Bl is nibbling at Y/G and Y/LB is or just was nibbling on the unmarked bird. 7:55 a.m. \Bl\G/ just carried a piece of cat-tail over to \W\B and deposited it, then promptly sat down on it. Neither bird gave any display or showed any particular interest in the other bird.

Feb 25. same locality. "Tuking" by \W\B is apparently continuing sporadically thru the day now. I heard it early this morning and off and on for the nearly 3 hours I have been watching this afternoon. This morning, due to a shortage of greens, a couple of birds were diving for "chickweed" that had settled to the bottom. This afternoon I gave them

Feb 25 Univ Calif Campus, Alameda Co., Calif.

greens. Lettuce, grass, Brussell's sprouts, celery tops, spinach and carrot tops. The celery tops, leaves that is seemed to rate first, at least they were cleaned up first, grass seemed to rate on a par with lettuce, some birds prefering the grass to the lettuce. Brussell's sprouts were peched at a few times ~~and~~ but otherwise ignored. Carrot tops and spinach have been given very little attention. This afternoon a very apparent peck order seems to be evident. O G seems to be at the top, even to chasing Bl G. Bl G rules over Y|LB, G C and Y|G, also apparently over all the ♀♀. W B seems to rank top among the ♀♀, with O Bl next. C W rules over LG|Br (UNM). Where P|O rates I don't known. Just now W B came up a ramp ahead of Bl G, when she reached the top she stopped and spread ~~at~~ her tail but made no other sign. W B once gave several typical ♀ notes, and O G once gave a series of ♂ notes. W B just gave some while chasing C W under the fern. Y|LB and LG|Br seem to be together a lot, also there seems to be some ties between O G and O Bl. W B seems to be particularly aggressive against LG|Br, chasing her on every occasion.

Feb 25 Univ. Calif. Campus, Alameda Co., Calif. — LG/Br, Y/LB and G/C, seem to be increasingly living on the west side of the court, out of reach of Bl G and W B, at least at the present time. W B chases P/O. P/O ships from and chased by O Bl. These birds seem to be particularly fond of the now yellow grass trimmings put in last week. Bl G chased P/O and O Bl. C/W is particularly aggressive towards LG/Br, chasing her pretty much all over the area, but G/W shys away from G/C. Y/G shies from O G. Now that the lettuce is pretty nearly finished some interest is being shown in other foods. Some are picking at carrot tops, there is still some celery left, the grass is pretty well gone, rating second, spinach and onions are apparently yet untouched. O G & C/W just in a huddle with some head preening. Y/G chased C/W. O G just gave Bl G a heated chase in the water. Bl G seems to have plenty of respect for O G. W B seems to also have a dislike for C/W. O G just now chased Bl G across and out of the pool on the west side.

Mar 3 Lake Merritt, Oakland, Alameda Co., Calif. — Water low with a lot of green algae along the edge. Lots of coots feeding along that edge. S/G seen on the mud flats. A lot of chasing going on. Some typical "charges" seen

May 3 Lake Merritt, Alameda Co. Calif. — on the mud. Some of the chasing may be over food, but a lot more of it seems to be of a territorial nature. The areas involved are not large, nor is any one area very consistently, or strenuously defended. Cooing, cackling, pumping and bobbing frequent and widespread. A pinned bird seen but no tags. The great majority of the birds feeding along the shore, and involved in this aggressive behavior, have swollen shields, in fact it looks as if a high percentage of the visible birds have swollen shields. - About 200 birds in the ~~feeding~~ ~~area~~ refuge area. Some of these birds seem to have the crown feathers in perpetual depression.
Bird 610 in inclosed area at refuge, pin still on, swollen frontal shield, about 35. 5/6 enlarged frontal shield present. - A pinned bird with two dangling copper wires seen near boat landing. One coot on boat near landing was feeding on the droppings of Forster terns. There are several birds here that have frontal shields fully as large, and much the same shape, as the birds that have testosterone implants. Noticed that while coots give away to gulls they chase terns - the terns showing no inclination to dispute any area with a

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mar 3 Lake Merritt, Oakland, Alameda Co., Calif.
coot. The great majority of the birds present show yellow or yellow green legs. No coots are grazing on the N side of the lake where the algae bloom is so heavy but on the S side, where there is not algae, coots are grazing on the grass, with the baldpates. The Baldpates are grazing alone on the N side.

— Lake Temescal, 420 ft., Alameda Co., Calif. — 7 birds in a flock feeding at LM 9+10. Among these birds are O/G, R/G, W/B and UNM (Bl/W?). They are attached by a bird with a very large shield every time they go S of M10.11. The attacker even goes on land after them, tho it is tolerating 2♀♀ & 1♂ mallard in the strait. The mate?, also with a large shield is preening on the island. The shield on O/G is flat, the shield on W/Bl is F or SS but not S, the shield on R/G is F, UNM is F. The attaching bird gives a "tack-tack, tack-tack, tack-tack" as it comes across to chase the flock. One bird in this flock has a swollen S shield. Two more birds w/o large shields were seen at N-P 26-27. Birds with large shields at O34 (may be from E end of dam since people are on the beach there), at O14 at L 8-9, at F10 and F 8 or 9. 3 birds charged from F9-10 to K10, then one bird splattered after another from

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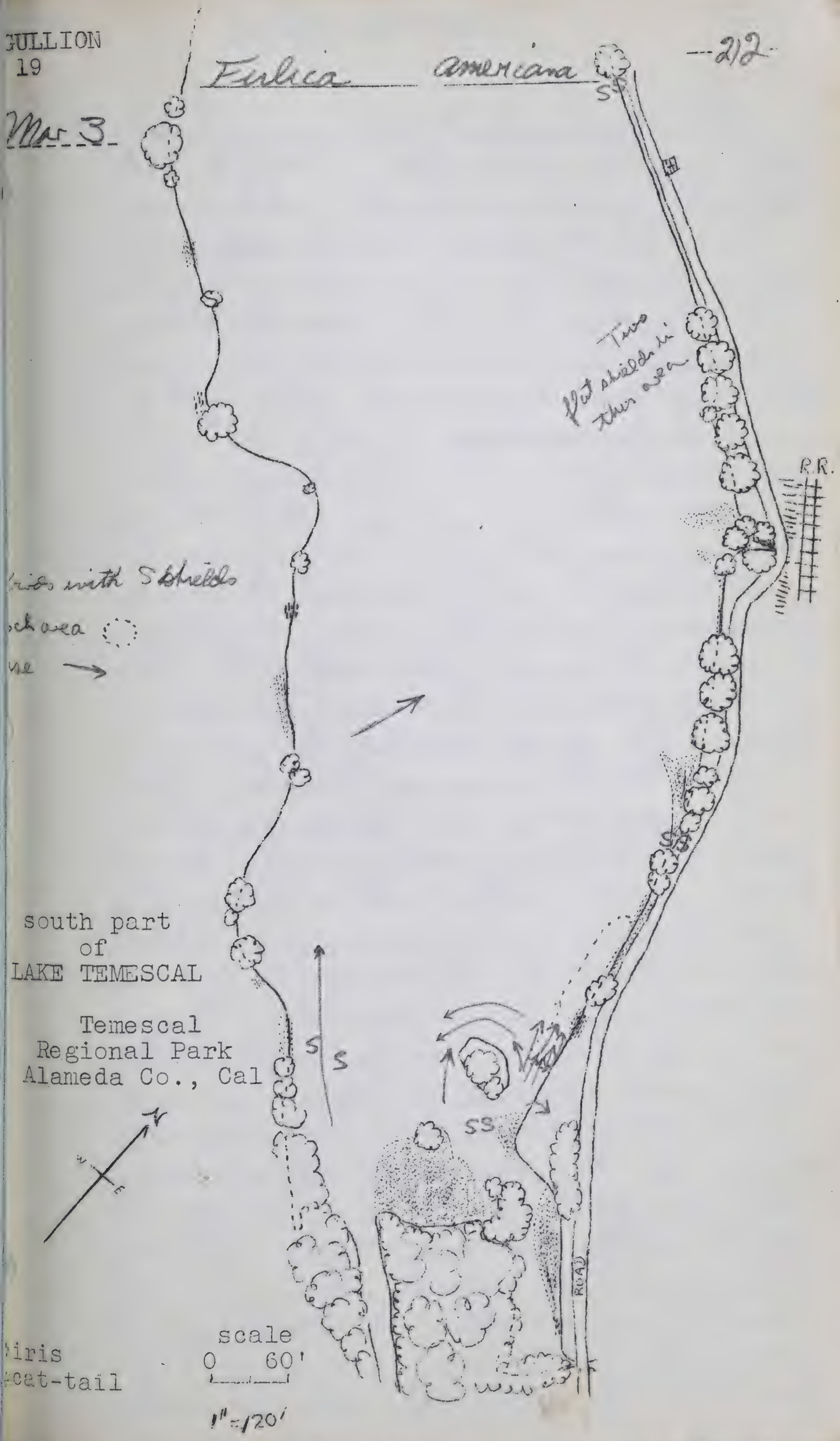
Mar 3

Fulica americana



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LAKE TEMESCAL

Temescal
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1" = 120'

Fulica americana

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Mar 3 Lake Temescal, 420 ft. Alameda Co. Calif. -
K10 to G9, fall leaving two birds behind, one cackling, the other crowing. Then these two, ~~other~~ almost about 20 feet apart started a charge from K10 going out of sight towards H9. A moment later one bird splattered after another from G9 to F12, the chased bird going on to F12. The chaser, ~~cackled~~ churred once, then cackled, the chased gave some "purk" like notes. Another chase, from G17 to I18 - the pursued bird tried to escape the onslaught of the aggressor. When threatened by aggression, the threatened bird apparently shows its under tail coverts, indicating concern. Among the flocked birds, the one with the S shield seems to be the boss, though W/Bl drove it off once. 4 or 5 of the flock are feeding at N13.25. Diving for stuff on the bottom. 1:30 p.m. 2 birds with large shields came out of cat-tails at K7.10 moved to L8, feeding on some grass on the shore, and then going back. One of these birds indicated some concern over a couple of Ruddies coming into the area. A bird diving at N13.25, under water 9 seconds. A bird giving ♀ call at K8.24 has a very enlarged shield. Mate came out, chased her to J7.25. They passed within a foot of a ruddy duck, showing no interest in it. Now one from J7.17 is moving towards the flock at L9, but turned around before getting to them, going into

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Mar 3 Lake Temescal, 420 ft., Alameda Co., Calif. - cat-tails at K7.7. The flock is eating very extensively on the leaves of the Carex growing along the shore at N12. 2 birds of the flock just got chased out from about I9 to I10, chasers crowed and cackled. A dog on the ~~shore causeds~~ shore at E11 causes 4 coots at I10 to display their tail coverts. - thusly -

Both SE birds seen billing on one occasion.

Birds up on shore adjacent to the area being defended by this SE pair don't incur the attacks that birds on the water do. Though short aggressive dashes are made, they are not consistently pressed. At 2:30 two birds of the flock at, L10.2, did a partial paired display and threatened to fight one another. A moment later a S shield bird came out and drove them and 7 other birds to M11. What ~~is~~ might be the beginning of a nesting platform at K7.16. Just an accumulation of cat-tail stuff.

Jewel Lake, 510 ft., Contra Costa Co., Calif. - 5 birds on lake when I arrived at 4:15 p.m. (see map next page). The bird that moved to E15, to feed on insects floating on the water, gave a series of ♀ notes. She does not have an S shield. Two birds seen over near L26 tho seem to have it. The bird at F9 and at F25

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Fulica americana

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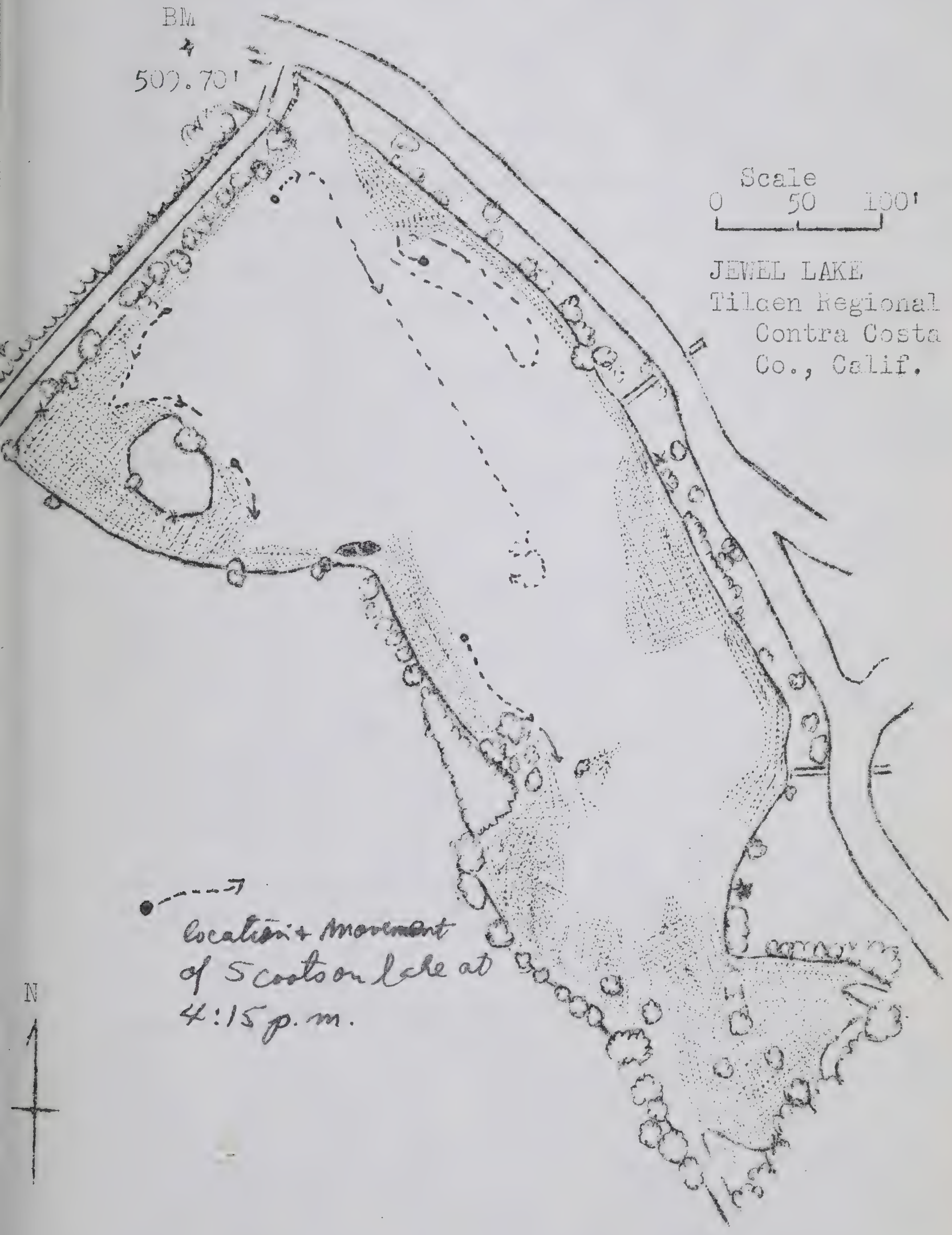
Map 3



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Fulica americana

Mar 3 Jewel Lake, 510 ft., Contra Costa Co. Calif. - also back on S shield. On second look I guess the two in the S area do have shoulder shields, but not of the largest class. Both of them seem to be feeding largely on floating insects, feeding by stirring and twisting like phalaropes. Two birds are feeding at D13, the S pair, two more at H 13, the north pair, a 5th bird is working from E15 to C21. Then the two from D13 moved N, the male to B18 the female to D21, then splattered to F26 where a short battle ensued. The ♀ after the battle and while in display "cackled," the other bird did not display or make a note. At the same time, another ♀ note came from a bird at K20, whose mate was sharing the boat with a goose. There is a golden eye, 1 or 2 canvasbacks, 2 ruddies and 2 Canada goose on the lake in addition to 5 (or 6) coots today. When I moved down towards the dam a bird with a S shield had a bird with an SS shield at bay. Now a few minutes later a full scaled clap was in force, from K27 but breaking off at G28 before actually attacking the bird. The bird doing the chasing is the one that had a pin but has lost it. Both of these pair birds seem to be feeding quite a bit on cat-tail tubers. I have not seen the other birds doing this.

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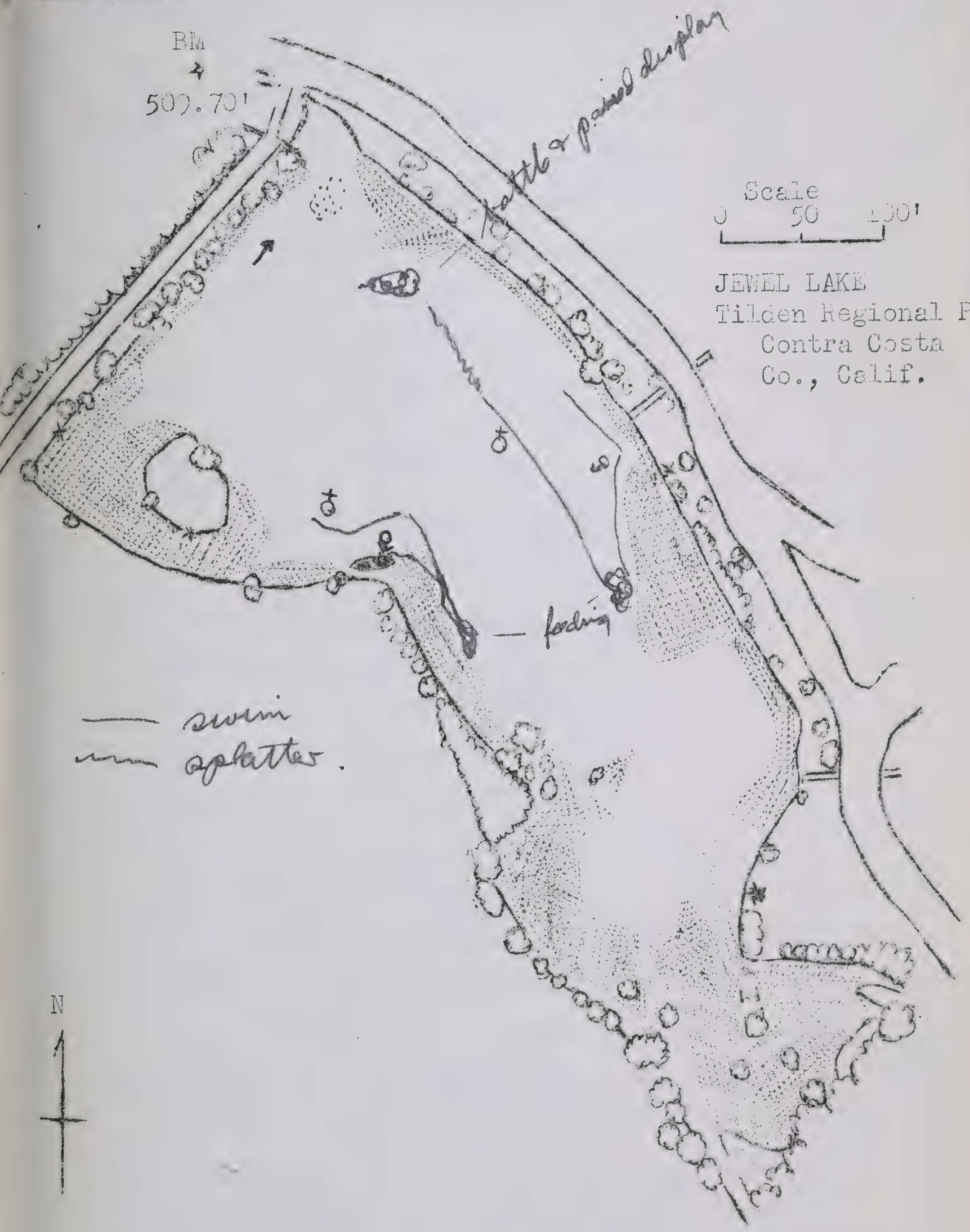
Fulica americana -217-

Mar-3



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Nov 3 Jewel Lake, 510 ft., Contra Costa Co., Calif. — Both birds of N pair have swollen shields. The ~~one~~ WH bird of this pair is the larger, in fact the pinned bird was just heard giving the ♀ note at K20 5:05 p.m. The N♂ is at N26. Apparently territory is not yet defended to its limits, with scattered defenses only close to the future(?) nest area. The one big effort now seems to be to get the fifth bird out of the area. A crow as just given by a bird at H14. 2 birds were feeding at C14, a ♀ chasing ~~the~~ fifth bird near the E end of the dam.

Nov 4 Univ. Calif. Campus, Alameda Co., Calif. ~~Over~~ Several feeds out in pond, romaine, mustard greens, broken up brussel sprouts, lettuce, grass clover, carrot tops, spinach and pondweed (from tank). Of the foods put out last Saturday, all but the whole brussels sprouts, and a few onions have been cleaned up. Two birds are minus tags, X/LB in addition to LG/Bs. A nest is well under way in the corner. Its base is composed of course pieces of bark with a few cat-tails on top. Between mustard greens and romain, the latter is chosen. WB reached up and took a bite out of ~~the~~ a leaf of the low shrub growing there. Roman still rates over spinach. WB, head down,

Mar 4 Univ. Calif. Campus, Alameda Co., Calif. — tail in "warning" position, giving a low "tuk, tuk, tuk". [illegible] is sure insistent about chasing one UNM bird. Some carrot tops, having floated over to the ramp, are being busily consumed. [illegible] was just giving the "pukk-ut, pukk-ut" note. [illegible] just gave a "punk-unt, punk-unt" note after chasing a UNM bird out of the water. [illegible] made one lash at Y/G. [illegible] pecked [illegible], [illegible] held her ground against Y/G. Romain, carrot tops and grass are rating top tonight. The spinach and lettuce & mustard greens have been investigated but that is about all. The ~~water plant~~, broken brussel sprouts and clover have had no interest shown. Water plant has had some takers, but not overwhelmingly so. Some later thrown in broken up apple has shown a lot of use. [illegible] and [illegible] were just in a huddle, [illegible] made a pass at what must be Y/LB, but had no effect, in fact had to back off. [illegible] is now in a huddle with [illegible]. Its getting dark, guess I'll stop now.

Mar 5 Univ. Calif. Campus, Alameda Co., Calif. — A UNM (surely Y/LB) attached Y/G. When diving or swimming under water the feet are used alternately and the wings are kept close to the body. [illegible] was noted feeding on the leaves of green cat-tails. In

Mar 5 Univ. Calif. Campus Alameda Co., Calif.-
fact the cat-tails have been hoist beaten up by birds nibbling on them. Of the foods in water yesterday, mustard greens remain almost untouched, clover completely untouched, spinach badly mauled but a lot still present, a few carrot tops and pieces of grass, ~~but~~ some apple and the broken ~~broccoli~~ brussel sprouts. Y|[redacted]LB, shield 11S, tags replaced. Bare shin where incision made, but I can't find any sign of the pellet that should be there. Wt 585 grams, legs green, bursa about 22 mm. anal temp about 40.5 °C. \W\B, left foot with ~~dea~~ swelling which has burst, extruding cheese like stuff. Shield 3S, legs green, wt. 482 grams, bursa couldn't be probed, temp. 41°C LG|Br, shield beginning to swell, but still about 10 SS. No sign of estrogen pellet under shin nor is a brood patch present. Wt. 517 grams. legs green but with suggestion of yellow. Under wing coverts P. \W\B may have the beginning of a brood patch, at least down is thin on rear of sternum. Some bird is losing a lot of feathers, mostly ventral judging by the pile in the corner of the courtyard. G/C, shield still growing, now 17 x 13 mm shape of class 11, can't feel pellet under

Mar 5 Univ. Calif. Campus, Alameda Co., Calif. - the skin, Missing tag replaced by a untwisted copper wire. Want to see how it holds up. wt 635 grams. Tag on Bl/G replaced by G/Bl - shield 11S, ~~leg green~~, wt 585 grams, legs are green but with a yellow tinge. Y/G has a shield 3SS, it is enlarging fast tho. Showing growth rings thus

fresh red. the growth all being posteriorly yellowish - green, but not the yellow green class. Bark gray, head & neck still fleched with light gray feathers, wt 599 grams. O/P. I believe this is the bird that is shedding feathers, at least the ventral feathers sure are thin on this bird. Shield 3SS, temper bad, wt 494 grams. O/Bl, shield 9S, legs yellowish green, wt 425 grams. Testosterone pellet still present under skin. C/W, losing feathers like mad on belly, shield 7F, temper bad tho. Estrogen pellet still under skin. There may be some lengthening of the shield on this bird. wt 405 grams. Testosterone pellet still in C/G, but small. No pellet in ~~LB/Y~~ Y/LB. No pellet on LG/Br. No scar left on these birds where the incision was made, can't even find the threads they were sewn up with. G/C, C/W, ~~Bl~~/LG/Br, Y/LB & O/Bl all go into the cage tonight.

Fulica 1950

Mar 10 Univ. Calif. Campus, Alameda Co., Calif.-
\G\Bl on the nest structure, standing there, and pulling some dried cat-tails close around it - \S\B (or \W\B - same bird) resting at base of tree fern - making a low "put" as its mate was fiddling with the nest. Y/G "presented" its head to O/P. O/P nibbled some but was mostly busy preening herself. - now Y/G & O/P are mutually nibbling. Now \S\B is on the nest, after a minute or two \G\Bl came up, presented his neck, and she nibbled on it.

- Lake Temescal, 420 ft., Alameda Co., Calif.-
A nest structure found at J6.7. This nest is fairly new and fairly complete. There are some sparrow droppings on it but otherwise no sign of excessive use. It is presently a flat accumulation of dried cat-tails, with the entrance and rudiment of a ramp facing W-towards the willow. It is densely covered overhead by dead matted cat-tails forming a canopy about 13 inches over head. From outer end of ramp to opposite edge, 22 in., breadth at right angles to this axis 11 in. Edge is about 2 inches above water. Green cat-tails are about 18 inches high, dead cat-tails 5 to 6 feet. Birds, both ♂ & ♀ are in the cat-tails at I 7, making occasional "pukks" or "poonks". One bird chased another out of the cat-tails at H6 to I 9. No display. When I came in a pair

Mar 10 Lake Temescal, 420 ft. Alameda Co., Calif. — were at K7 in the cat-tails but they left via S side of the rock. Another pair heard at H6 or 7. One bird just "kak-kow"ing at about F15. A second, even fresher nest at J6.5. This about one foot in from the edge of a dense stand of cat-tails. Ramp is facing open water to N. Nest not finished but well formed, no dropping of any kind in it. Mostly of dead cat-tails, but with a few green ones woven in, and one twisted around overhead. Little sign of an attempt to develop an overhead canopy, but rather, placing the nest under one formed by breaking down of upper parts of cat-tail leaves. Ramp not completed, lots of loose poorly worked leaves scattered around. Does not appear to be anchored to anything but rather wedged between three groups of cat-tails. Highest edge not over 2 inches above the water. 2:30 pm a crow at I 6.19. — There is an accumulation of cat-tail material at I 7.20 that may be the start of a nest. It is composed mostly of loosely piled, floating with the waves, dead cat tail material, largely seed stalks. But the presence of at least 6 green leaves, bitten off at the base, surely indicates that is is of original origin. Some sort a wantering going on in the bushes at I 7, one bird, perhaps a ♀, shows

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Mar 18 Lake Temescal, 420 ft., Alameda Co., Calif. — a partial display as it moved W into open water. Another, ♂, moved E to J7.1 pukking some. Now a ♀ at H7.7 and a ♂ at I5, ~~both~~ giving "pukk & poonks". There was a chase near I5, don't know the nature of it. Now some sharp "pukks" at J6.10. I don't believe the SW pair has another nest structure yet, but it just may be possible. I looked around pretty closely. R\G seen with another bird in the area I11 crossing to F16. Two more tagged birds seen down near G25. Some displaying & chasing there, about 8 birds in that area. — The E pair have not yet built themselves a platform as far as I can tell. They were both at R22.5 when I came up and without protest swam out into the ~~the~~ middle of the lake. 3 mallards (2 tagged) were resting undisturbed at Q23.12 & 13. The last years nest site at P16 is impossible since burning the cat-tails makes it too open, but the new growth is coming up fast. Many of the cat-tails are broken down at Q23 so nesting is not to suitable there, but Q22 looks okay, but apparently no nest yet. Just might be enough cover at Q25 for a nest, better look. Nesting in this area is not impossible, but seems improbable. I have noticed today, coots feeding on the leaves of low hanging weeping willows. To the extent that every tree

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Mar 10

Fulica americana

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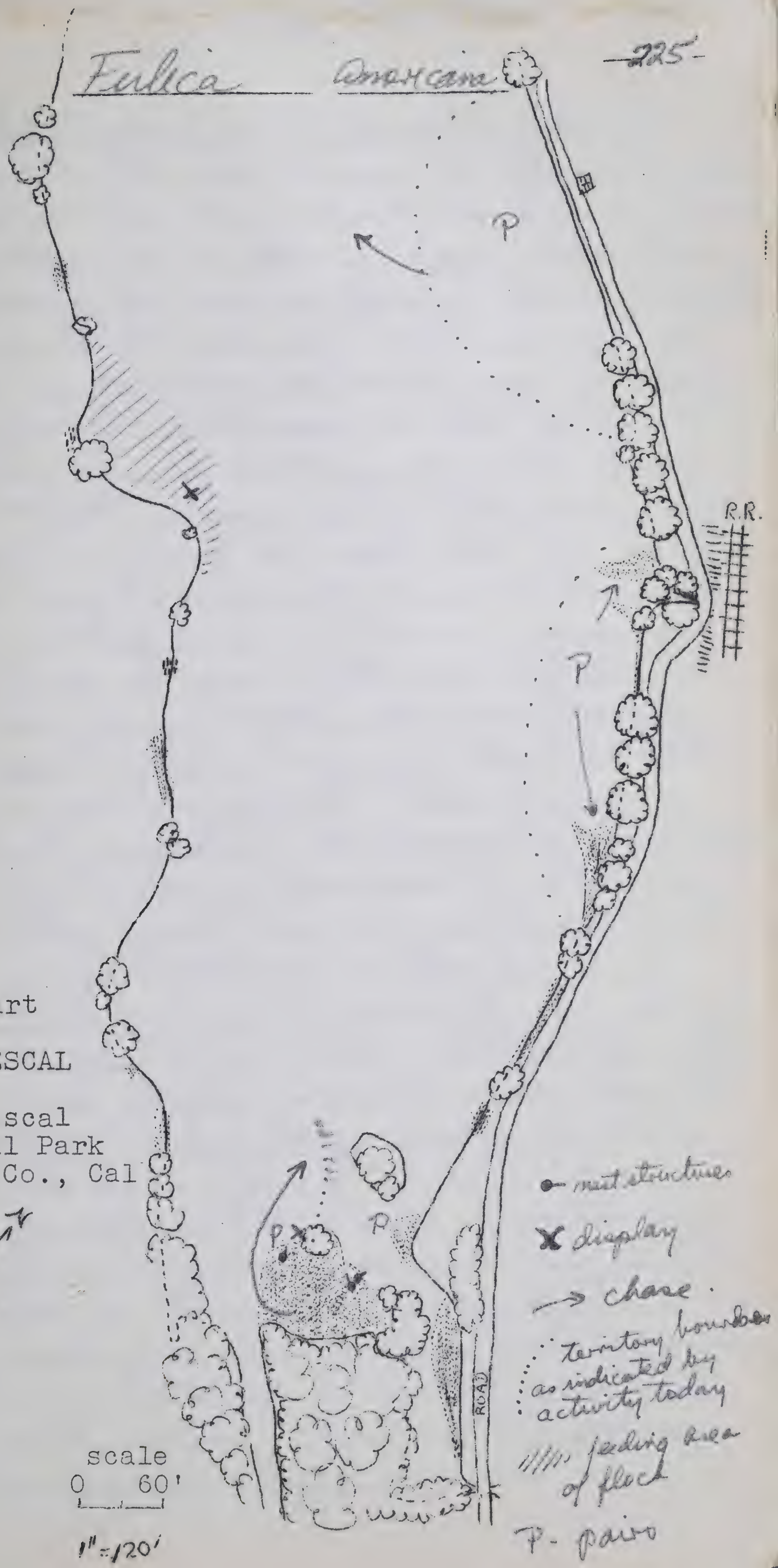


south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

iris
cat-tail

Ellion 950

Fulica americana 226

Mar 10 Lake Temescal, 420 ft. Alameda Co. Calif. -
with branches drooping to the water, has a browse line about 15 or 16 inches above the water surface. I have noticed very heavy feeding on Carex leaves, particularly in the SE area, and there seems to be a great deal of ~~A~~ feeding upon cat-tail shoots. The ~~are~~ cat-tails at Q23 are densely interspersed with green shoots nipped off at the base. Some of this may be used later for nesting. I don't know, but now it is widely scattered and not in any organized form. O/G seen, W/Bl seen. O/G took a piece of bread away from another coot. One of a pair, the ♀ got the bread originally. The ♂ was in hot pursuit. She dropped it he ate some of it, chasing her from it, but when other coots came in, he turned and fought them off, letting her feed. After a couple of minutes O/G got in, grabbed it and ran. Noticed another bird feeding on weeping willow at Q28 - The Carex and grass along the shore from Q28 to O34 is badly eaten down, hardly any Carex or grass growing. The dock (Indian tobacco), clover, plantain, lupine (or some other legume), native willows, are not touched. A vetch was badly eaten upon. Mint not touched, nor are several Compositae

1
42
26
2
11
81

Mar 10 Aquatic Park sl., Berkeley, Alameda Co., Calif. -
No coots in KRE pool. 42 in skirmishing area at S end. Gregarious, little chasing or displaying, mostly feeding. 1 pair were at the opposite end of the pool (west) from the 40 birds. No tags. At least ½ of the 40 birds have enlarged frontal shields, none really big, but growing. They are feeding on some green substance they are obtaining by diving. Birds bringing food up are subject to some chase, but not much of it. They seem to be getting an abundance of food.
26 coots in "reef" area. Mostly feeding among the gulls on the reef or on grass on the shore along the road. 2 between reef and refuge. 11 in refuge area along with many scaup, a couple of golden-eyes, a horned grebe, 8 pintails & 2 pair of baldpates. No tagged or pinned birds seen on this pond.

Mar 12 Lake Merritt, sl., Oakland, Alameda Co., Calif. -
Many coots on the lake today, many with greatly enlarged shields seen. Also two pinned birds seen

Mar 13 Univ. Calif. Campus, Alameda Co., Calif. -
6♀ on nest this morning. Doesn't seem interested in leaving it. WB close by but not showing much interest. After going over to feed for a moment, ♀ came back to nest, pulled a cattail leaf in from the edge, then sat down in the nest, more or less facing

Nov 13 Univ. Calif. Campus, Alameda Co., Calif. —
W/B and assumed what almost amounted to the display of paired display, only I don't think the under tail coverts were spread quite as fully as they are then. His tail quivered (with pass in?). Peace seems to be reigning supreme in the court now. No signs of aggression by W/O or W/G. Legs on W/O are red getting bright yellow, same goes for P/O. Legs on W/B and Y/G still seem to be green, can't see legs on W/R. W/G seems too be very broody about this whole nest business today. He is not showing aggression against other birds preening within 5 or 6 feet of the nest, seems concerned about nothing but the nest. Just now W/G moved over towards Y/G, Y/G bowed but W/G pecked Y/G instead of nibbling — Y/G moved. W/B first chased an ate an insect. W/G just chased and pecked P/O a couple of times - walked close to W/G with no effect, ignored W/G on the nest three feet away, went over to feed on greens with two other birds. Y/G just picked one cat-tail leaf up from beside the nest and carried it over to the corner. W/R, the on the nest made no attempt to ~~[illegible]~~ interfere, but merely got up and tugged on another cat-tail just outside of the nest. Now in the water, W/B giving a low "punk-ut, punk-ut, punk-ut" as W/R returns

Mar 13 Univ. Calif. Campus, Alameda Co., Calif.

over to her. He was silent, not much other display by either. Now all at once the whole lot become frisky, running around flapping wings etc. W B was bathing, diving and splattering over the water.

— see next page —

Mar 15 Jewel Lake, 510 ft.; Contra Costa Co., Calif. - At 3:05 p.m. - 2 birds feeding and diving at E4, 1 at G18, 1 at L27. Also 2 golden eyes and one ruddy. A couple of minutes later, 1 bird w/5 shield at D11 moving onto D14. 1 at H12, and two others near the boat. One of them, now at F9 is busily picking insects off the water. Now as one bird moves out from C11 to D9 another bird at G7 gave a few low "punks"; like those given by ♀ ♀ ♂ in the courtyard. Now the 1st bird is moving to F7 and the other came across to meet him ♂. Now both are diving for and eating what looks like rotten cattail material, but it may be Potamogeton. Something, perhaps roots, has been feeding heavily upon the "Indian tobacco" along the shore at A10. 3:25 p.m. a bird chased from G13 to G16 - gave the female "poonk" as it swam off towards C23 - several times. As it cleared the point by the boat, a bird resting in the water at L21 gave several "punks" of the male. At this time 5 coots were seen - this chased bird being the unpaired bird. After chasing this bird, the 5 birds drifted a little S the E being joined by another bird up from the S end. There was some "put-put-put" given as the two ♂♂ together

GULLION
750

Mar 15 Jewel Lake, 510 ft. Contra Costa Co., Calif.—
at C16. One of the two birds in the general area SE of the island is feeding on insects as she works N around the island. Her tail is elevated—another bird is giving the male "punk" in low tones at M25—as she worked around her tail became higher—when she came opposite the ♂♂'s position she displayed and swam away from him, giving a low "poonk", then, went on into the cove. He ceased his note, came out and moved S around the island, he looks pinned. The extra bird is with either F or S5 shield, probably the latter. One bird (♂?) charged from L20 to H27, charging his mate at H29. (The 5th bird was at B22—the 5 pair at C12). She sort of moved away from him circled around to the E while he dabbled and preened at H27—then moved out to him—he (the marked bird) nibbled and bit at her bill, she reciprocated some, then moved off towards the cover. In the charge M (for marked) passed within a few feet of a resting Ruddy and a pair of Golden-eyes, the Ruddy became momentarily uneasy, the two Golden-eyes ignored M. Those ducks are together at K26, deep in the N territory. Heard some "poonking" at G10—1 bird there—now they are both at F-G5. Both birds

Fulica americana

Mar 15 Jewel Lake, 510 ft., Contra Costa Co., Calif. — (M just charged from near the island to G24, chasing, by splattering, a bird from G24 to E22, no sounds - the chased bird went no further - just now 3:55, a "puhking" bird at E15, giving "puhk, puhk-kuk, puhk-kuk". M responded by going into charge position, but did not move far, down to G22 then off to the west) in both pairs have fully enlarged shields M charging from the island again, went to H25, paused now going on in full charge, moving a Golden-eye out of the way at E23, chasing another coot to C20 - in the meantime the S pair came charging up to about C20 repeling the 5th bird towards the boat. M indicated no interest in the S pair at C20. They remained to dive for Potamogeton there. Now M with some "puhk, puhk-kuks" has gone into the cat-tails at L21. Both birds of the S pair are now going S down the middle of the lake 4:05 p.m. - they fed at ~~E20~~ D20 for about 4 minutes One S bird jumped the 5th bird at H13, it dived, going under water to H17 - no notes by either bird. Now 5th bird feeding at H19. M at L21 showing little interest, his mate at M26. 4:10 p.m. - now the 5th bird is moving over to B22. Now M's mate feeding on emerged cat-tail leaves at M26 - M charging from the island, making at loop towards the

Mar 15 Jewel Lake, 510 ft., Contra Costa Co., Calif. - 5th bird feeding at C20, as the 5th bird moves S from there M loses interest, but then comes on, at a course about parallel to 5th, moving, sometimes in charging position, sometimes not, to I 22, while 5th feeds on Potamogeton at D19. Guess the shield on 5th is at least SS, but not more. Found a developing nest at N25.23. Platform well built, several cat-tail leaves in ramp, no cup yet, cat-tails on top are rather loosely piled on. Examined the cat-tails from B17 to BC11, also F9, was not able to find any trace of a nest or platform structure. I'm quite certain there is none. But the two birds in that area seem to be most concerned about the area in from C13.

Mar 17 Univ. Calif. Campus, Alameda Co., Calif. - ~~G/C~~, shield very much enlarged - photographed. Legs scaling, revealing a yellow under layer. The feet on this bird are in rather bad condition. A piece of skin removed that may have been the testosterone pellet - if it wasn't then none is present, which I suspect is the case. Shield on this bird - 17 mm long by 14 mm wide, and projecting way above the surrounding feathers. No sign of new recent growth, it is

GULLION
950

Mar 17 Univ. Calif. Campus, Alameda Co., Calif. — the shape of class 3. Wt - 599 grams. LG/Br - photographed black & white and color p.269. Shield about flat, no indication of estrogen pellet, so a testosterone pellet under the skin. Legs green. Temper mild, little struggling and little pecking. Wt - 486 grms. Yellow green just above heel. Shield very SS, just over class 8 (9×7 mm). P/LG - old tags placed on silvered pin, reattached. When pin tore out is a good scar, no feathers. Shield 3 SS, weight 481 gms. Photographed P/LG p.270. Also rephotographed LG/Br. Bird formerly marked B/Y retagged Br. Legs green, shield 7 SS, wt. 412 gms. Cw - photographed, BW & color. Estrogen pellet found and removed. Shield a little swollen from last time, barely into the SS classification, shape and ~~and~~ size - 8. Wt 348 grams, legs green. Died from too much ether. Bl/O - photographed BW & color p.271. Shield 9 S. A lump of skin removed that might have contained a pellet of testosterone but I doubt it - put three small particles of estrogen under the skin. Green legs, ~~don't want to chance this bird, so no weight~~. Wt - 404 grams. Bird formerly tagged Bl/P retagged O - photographed in BW and color. A large testosterone pellet placed under skin to rear of incision. Shield 1 SS, legs green.

GULLION
1950

Fulica americana 235

Mar 17 Univ. Calif. Campus, Alameda Co, Calif.
wt 446 grams. Y/LB - photographed
in BW & color p 289. Held NS, 3 small
estrogen pellets p under skin to
rear of incision, legs green.
WT - 510 grams. C/W dissected - no
flukes in nasal area, 1 fluke ~~in a~~
~~cardiac sac~~, in axillary air sac
Lungs flooded with blood, smear taken
of lungs and heart. Heart etc saved.
Also wing, leg, ovary & bill, cloaca,
Saved a section of the proventriculus
with some dark blobs in it, also found
an enlarged shell gland(?), saved it
in Bouins. Nematodes in the usual
gizzard position, saved them in hot
alcohol, also the ulcer covering in
Bouins. This bird was in good
physical shape. Its breast was
full and it had a fair amount of
fat scattered about its body.
Its intestines were clean looking.
they were not examined for parasites.
Bursa 26 mm, narrow (moderately
so).

Mar. 19. Gray Lodge Refuge, 800 ft., Butte Co., Calif. -
1 bird caught in a trap yesterday at
the S side of the refuge tagged
today G/R for release at Woodland.
This bird is a ♀ probably. Lots
of birds on the refuge, a few
paired and on territory, others
in flocks grazing. This bird
probably was one of a pair.

GULLION
950

Mar 19 Conway Ranch, Woodland, Yolo Co., Calif. - Lots of birds here today. Several flocks of 60 to 200 birds out seen feeding on grass away from water. Also 10 to 12 pairs seen on territory defending areas. Bird G/R released on a slough. This bird isn't in too good shape, but it may make the grade. (Incidentally, I saw no bird feeding on Dodder Cuscuta (Indian Tobacco) on the Jesse Lodge Refuge yesterday).

Mar 20 Univ. Calif. Campus, Alameda Co., Calif. - Watched G/W on the nest for a few minutes. He repeatedly stamped his foot, had his head down a little and seemed to be in a display pose.

Mar 21 same locality - Shield on Y/LB seems to be a little regressed today, somewhat wrinkled. Shield on Bl/O is 95, also I believe a regression from about a 65. - (no regression see p. 234).

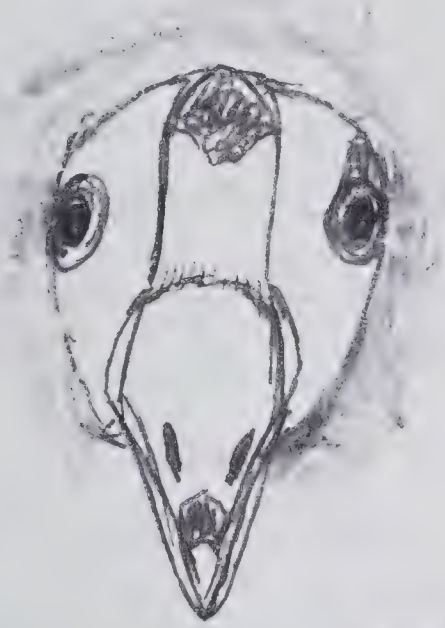
Mar 22 same locality - Shield on O smaller, now approaching 65, shield 10 mm long but about 11 mm wide. Shield about as below - bill sorta badly beaten up.

Frontal

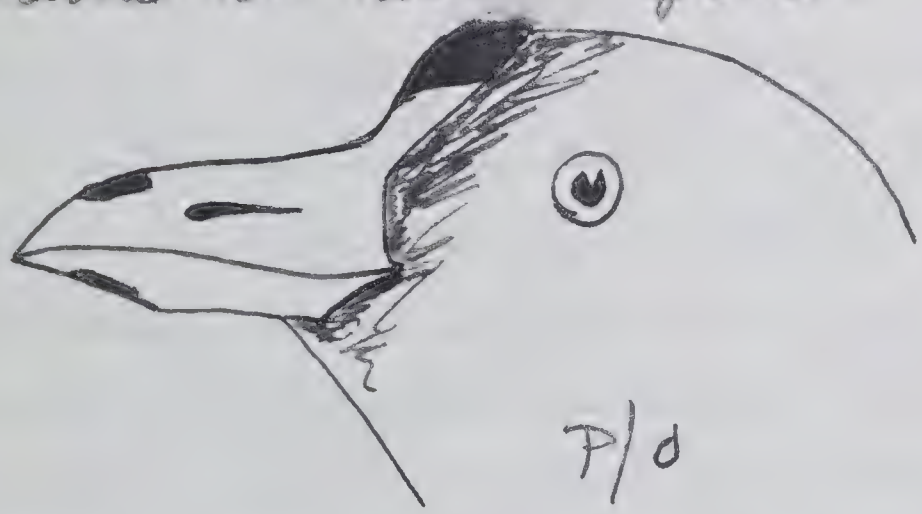
view more or less as indicated on next page.

Fulica Americana 237

Mar 22 Univ. Calif. Campus, Alameda Co. Calif. -
This bird has some bleeding around the pin. Also a bad temper. Legs green



P/C - plated pin replaced by silvered pin with new wire style. Shield 35. Legs green, very little dark on bill, bill generally very clear in color. Weight 585 grams. - This bird made a low "poonk" as it swam away after release in the pond.



P/C

Note:- The bird G/R taken at Gray Lodge over the week end was taken on the S side of the road skirting the S side of L. Mouse Pond - Lake Tamescal, 420 ft. Alameda Co. Calif. 1 egg, marked #1 in the nest at J6.5 Two coots belatedly came into the cat-tails behind the nest, making some noises, one churring 3 times.

GULLION
900

Mr 22 Lake Temescal, 420 ft, Alameda Co., Calif. - The other nest at J6.7 seems to be larger and better formed than when last seen. There is some sort of disagreement deep in the cat-tails at the S end, mostly ♀ ish "punk-unk, punk-unk" noted being heard, tho some splashing and churning was also heard. One coot just got chased out of the S area, being chased to I 10 then swimming across N of the island - some low ♂ "puks" were then heard from the chasing bird. When I came into this area about 4 pairs of mallards were in the SE area resting on the floats. They all flew as I came in. One did a lot of quacking, may have a nest in here. Another nest, which I was surprised to see, at P16.2. This nest is very exposed, being in an area burned last winter. The old cat-tails are nearly completely gone, but a good growth of new are coming up. However the cover does not exceed 30 inches in height. This nest is composed mostly of green cat-tail leaves, broken and torn until they could be worked into place. One bird was near or on the nest. It looks almost ready for eggs. Another new nest, not present at last check, at Q23.11. Composed almost entirely of dried cat-tail leaves, it looks nearly finished, but with no ramp. It may be too big for an

1
3
7
7
$_2$2
23
43

GULLION
950

Mar 22 Lake Temescal, 420 ft., Alameda Co., Calif. — egg nest. All see dates

→ — Jewel Lake, 510 ft., Contra Costa Co., Calif. — A nest with 4 eggs found at F25.7. Eggs cool, marked *1, 2, 3, 4. Nest big bulky, composed almost entirely of dead cat tails - or I should say, completely composed of dead cat tails. While this nest is not close to the open part of the lake, the beaten up nature of the cat-tails puts it in a fairly open position, as it is close to open water. The ramp faces the open water to the NE. It has a very deep cup. There seems to be only 4 birds on the lake today, plus the goose and a pair of Golden-eyes. Could find no nest in the area I 18 south to I 6, or from C 6 thru to A 17. But the 5 pair watched me closely all the way around, showed most concern when I was near H 14. I did not get out to the point at F 9. Several times the 5 pair were billing, but the N pair were not close together. One N bird was near G 17 the other at the cove N of the island.

Mr 24 Aquatic Park, Berkeley, Alameda Co., Calif. — 1 coot seen near boathouse, slightly swollen shield. 3 coots in area immediately north of refugee area Shield conditions not determined

4
14
25
43

GULLION
1950

Fulica americana 240

♀/Bl as of 3/17/50

♂W as of 3/17/50

♂/C as of 3/17/50

♀/Bl as of. 3/17/50 same as top, only direct from photo-graph.

Mo 24 Aquatic Park, at Berkeley, Alameda Co., Calif-
17 coots in refuge area, shield conditions not determined. 7 in the reef area. These all had small shields, and with the exception of the first bird seen, I believe that all of the remaining birds have either flat or nearly flat shields. 2 birds seen together at S end of reef area, both with swollen frontal shields. Probably paired birds. 23 at pool at S end, 22 of them in one flock at east end of this swimming pool. 1 of these 22 had a swollen shield, about the size of 9/Bl (p. 240), the rest had little slightly swollen or flat, but few really flat, maybe 4 or 5, surely no more. The majority of large shield birds seem to have departed since I was here last time.
— Lake Merritt, Oakland, Alameda Co., Calif.-
A coot, seen on Feb 3, and number read then, found dead on the island several days ago, and band recovered # 40-600861. This bird will be worked over in detail tomorrow. S/G
and #96-71610 also seen in fenced area. 610 had a quite enlarged shield, up from the flat class of some time ago. A great majority of the birds here have swollen shields, a few have less swollen shields, but none seen with truly flat shields. The rains came so I moved on to Temescal. Another ringed bird seen to E of fenced area, probably 648.

V. GULLION
1950

Fulica americana 242

Mar 24 Lake Temescal, 420 ft., Alameda Co., Calif.—
3:15 p.m. 2 eggs in nest at J6.5. Both it and its companion nest are floating tho the rain today has brought the lake up about 8-10 inches. Both nests look nearly complete, both have some greenery in them but mostly dead cat tails. The ♀ came in fairly close, showing some concern about the nest. Looked over the rest of the S end without finding any more nests. Saw ♂ w/Bd and ♀. The nest at P16.2 is suffering badly from its exposed position and the heavy waves rolling across the lake against it. The nest at Q23.11 is largest, in good position to be studied from the bridge over the E inlet. Both birds gave characteristic notes as I approached this nest. No eggs. Saw one tag lost, the left one, only the wire dangling. Didn't see the M bird (w/Bd?). The water is really rough today. Saw one bird charge by close in front of another bird, and as it passed it raised its head up and back.

Jewel Lake, 510 ft., Contra Costa Co., Calif.—
At 5:35 p.m. when I arrived, both N birds at F26- M is the larger, must be the male- they cut across towards the island, M in a semi-charge. When they were at about J23, a S bird chased another, splattering to G22- N birds showed interest but

L. V. GULLION
1950

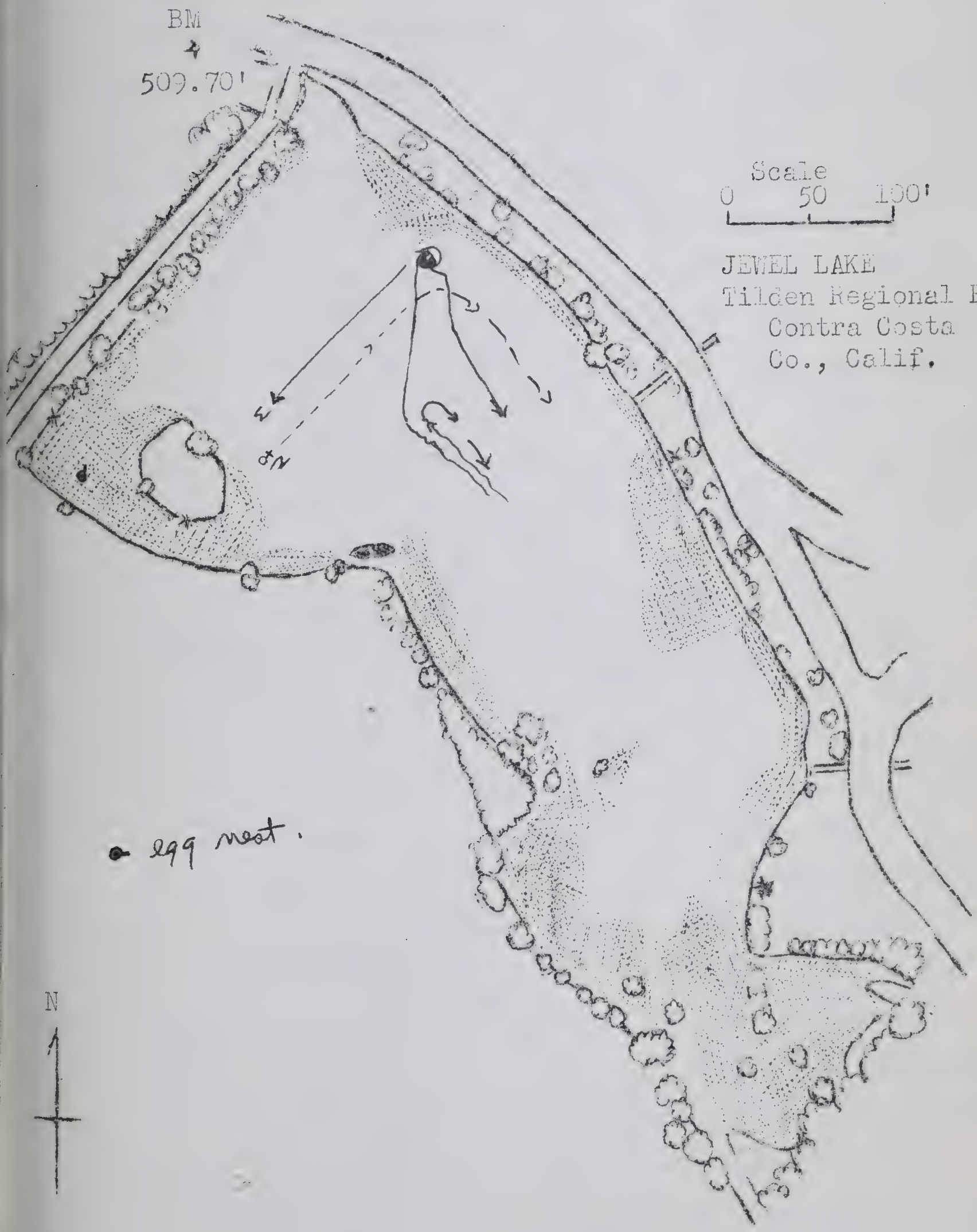
May 24 Jewel Lake, 510 ft., Contra Costa Co., Calif. — made no display. The chased bird then cut over to E 26 to feed on some cat-tail leaves uprooted by the N pair. The S bird returned S and soon the chased bird (with a swollen shield) darted off S again. M has just spent the last couple of minutes at about ∠ 22.18 busily "punking" at his mate who was over behind the boat. The nest at P25.7 has six eggs in it, all cold. Eggs 5 & 6 marked. Incubation apparently has not begun yet. This nest is floating so the 6-8 inch rise in water level of the lake from the past heavy rain did not damage, or even endanger the nest. Now 5:15 p.m. N♀ is charging another bird (5th?) from the island to F 25 then S. M started to charge out from the island, went as far as G 19, turned off to go down towards H 15. When S♀ was last seen she was chasing the other bird S at about D 23. I'm not sure that this chased bird is not one of the 5 pair. I don't know. While I was in close to nest P25.7 the parent birds showed no interest, but stayed out on the open water near the boat and island. (see page next page)

May 25 Same locality Nest P25.7 has 7 eggs in it at 9:30 a.m. Neither parents are to be seen or heard. All 7 eggs are cold, no incubation

GULLION
1950

Fulica americana 244

Ma 24



• egg nest.

CULLION
950

see p. 519

Mar 25 Jewel Lake, 510 ft., Contra Costa Co., Calif.-
yet. Nest photographed in Bl W and color to show concealment. Since the water has gone down some, this nest is much higher out of the water than it was. It has a very deep cup and is generally a large, bulky nest. A fifth bird is on the lake today, just now 10:05 a.m., it was chased out of the S area, flew to G16 where it alighted. As I work up and down this W side S of the boat, the S pair are in attendance, doing a lot of billing etc, but giving no leads as to the whereabouts of their nest. Birds of the N pair seem to be invading the S territory, there is no 5th bird here today, I think, but rather just on after chased N♀. Just now 10:35 a.m., the N♀ was chased out to about F18. the chasing S bird went into the cat-tails at C13 - a moment later, M coming down from the N end, penetrated to F11 before the S pair came out ♂ leading to chase him back to F18. M did not display, but the S ♂ did - the S ♀ did not participate in the chase but did follow it - ~~of~~ she gave encouragement in the form of her usual "punk-unk". After the chase M went to E26, N♀ remained near F18, & the S pair retired to C12 to feed. I have really gone over the area from H18 to F-H9 and I'm sure no nest

GULLION
750

Fulica americana

Mar 25 Jewel Lake, 510 ft. Contra Costa Co. Calif. — is in that area. Looked over area A-C 12×13 - no nests there, tho I saw 8 pair out of there.

— Lake Temescal, 420 ft., Alameda Co. Calif. — the nest at J6.5 has four eggs in it, meaning that two were laid during the night. They were marked #3 & 4. Both SE birds were nearby, the male in partial display while I was near the nest, the ♀ showed less demonstration than the ♂. While I was at the nest I could hear — (just now a male giving "plukk-uk pukk-uk pukk-uh, uhk, uhk, uhk" in partially display, that is head a little lowered, tail elevated as it faced and swam from - I 11 towards I 9). — another pair over near H 6 making some low noises ("prunk-runk" etc). — A rather severe battle at F 15-16 - a pair chasing, with considerable splattering etc - 2 other birds, to H 17. The male crowed "kuk-kuk-kuk" 3 times, before it turned S again. This bird was displaying as it crowed. A bird came over to the nest at P 16.2, climbed on it, it nearly sank, and stood for a moment flapping one foot on the nest, then flapped the other one. Finally, after some preening in left, swimming off to beyond P 24. Counted at least 11, and figure there are at least 4 more unseen today. Saw 2 ♂.

. GULLION
1950

Mr 25 Lake Temescal 420ft. Alameda Co., Calif. —
Examined the nest at 6 23.11. No eggs. I think the high water ~~yesterday~~ yesterday may have partly upset it. At least it is a little unneat like today, but should be easily repaired. Both ♂ & ♀ were nearly to show interest. While they were near me at 6 23, another bird was chasing a flock at P 30. The ~~a~~ weeping willows within territorial waters don't seem to be badly browsed, the willows 6 27+28, O 35, C 33, D 26 and to a less extent E 14 and 12 are the ones most badly beaten up.

Mr 26 Jewel Lake 51ft. Contra Costa Co., Calif. —
5 pair feeding along W side of lake at 8:35 a.m. from H 12 to H 4. ♀♂ seems to be feeding mostly on insects picked off the water surface while ♂♂ is feeding on insects and to some degree on the green tops of cat-tail leaves. Once ♀♂, a ♀ or 6 9 gave two or 3 "poonks", about 5 minutes later, ♂♂, in the same area, gave several low "puhks". The ♂♂ coming over to C 11, ate some down from cat-tails. All the coots on the lake seem to be spending most of their time feeding on floating insects. Once, the ♂♂ chased a ♀♀ bird out of H 4, chasing it to F 18. Immediately both birds of the N pair came down, M charging.

♂ ♂ "puhks" were heard from the S end.

Fulica Americana 248

Mar. 25 Jewel Lake, 510 ft. Contra Costa Co., Calif. - Chasing it back S. The S ♀ then started to close in, and the S ♂ came out from C15 to chase it S to H4. The 5th bird was forced to fly going both ways. Once it had to dive to escape M at E18. Later, the N ♀ was feeding at H14 - M came down more or less chased ~~it~~ ~~her~~ her, then got south of her, and charged twice, driving her N. She dived each time he charged. 8 eggs in the nest at P25.7. Still no incubation.

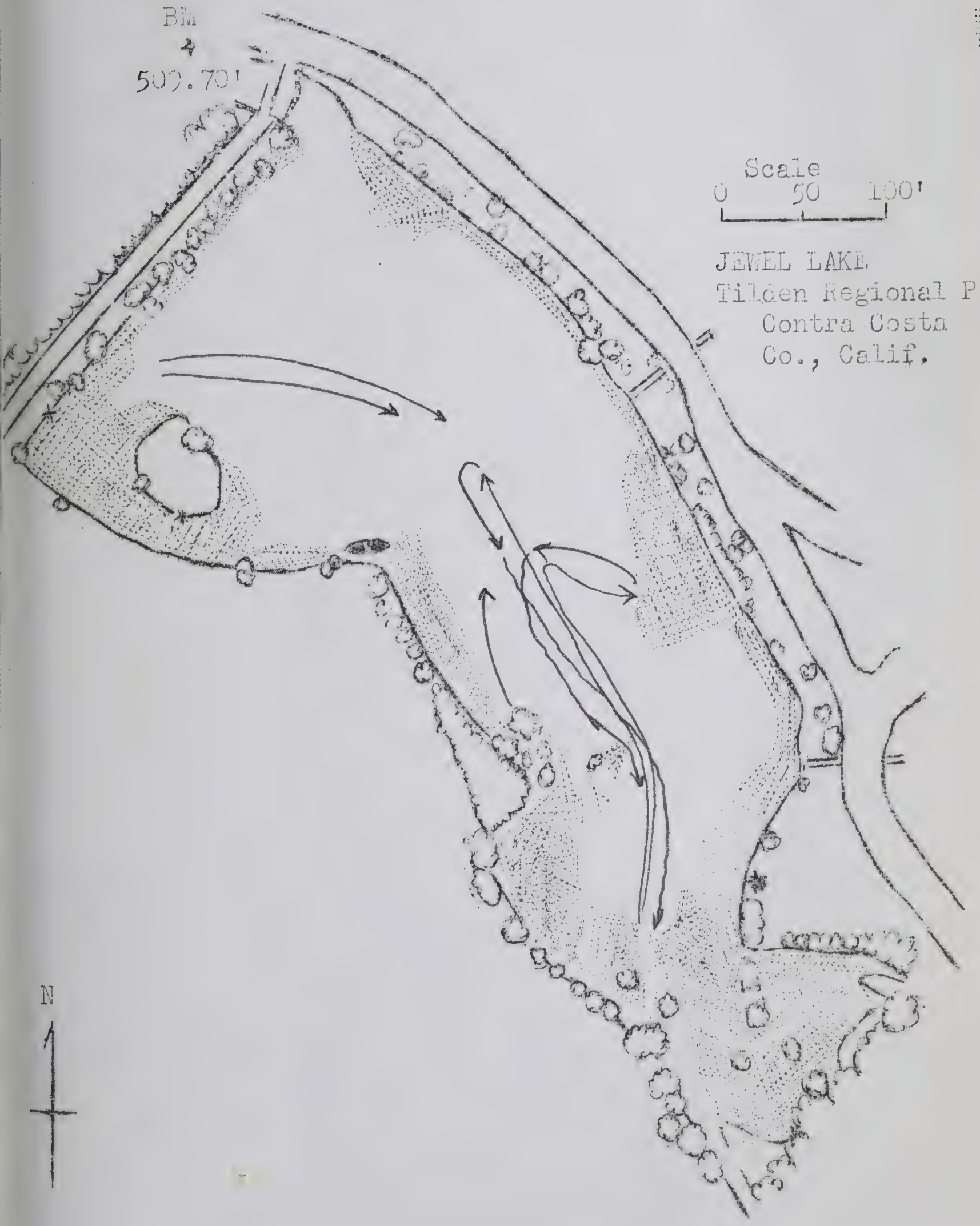
— Lake Temescal, 420 ft. Alameda Co., Calif. - The nest at J6.5 with 5 eggs in it. Both parents nearby, one (the ♂?) churred a couple of times but made no noise. The other (♀) "pumped" several times, both birds being fairly close, the ♂ at J7.13 the ♀ at K6.13. Two other coots were head in the cat-tails towards I6. Examined the rest of the area for the other nest, failed to find any sign of one. w/Bl and $\frac{0}{6}$, part of flock feeding at N12 - a ♂ (E) came down chased, one at a time, most of the flock out to about I12, at the same time the E ♀ chased another bird from N17 out to K22. Another bird was in display at E14 facing North. The shield on w/Bl is SS. Now a bird momentarily charged #1 (Bl/w) at L11, then stopped to preen, this bird has a swollen shield. $\frac{0}{6}$ adds pas a SS

GULLION
1950

Fulica americana

249

Mar 26

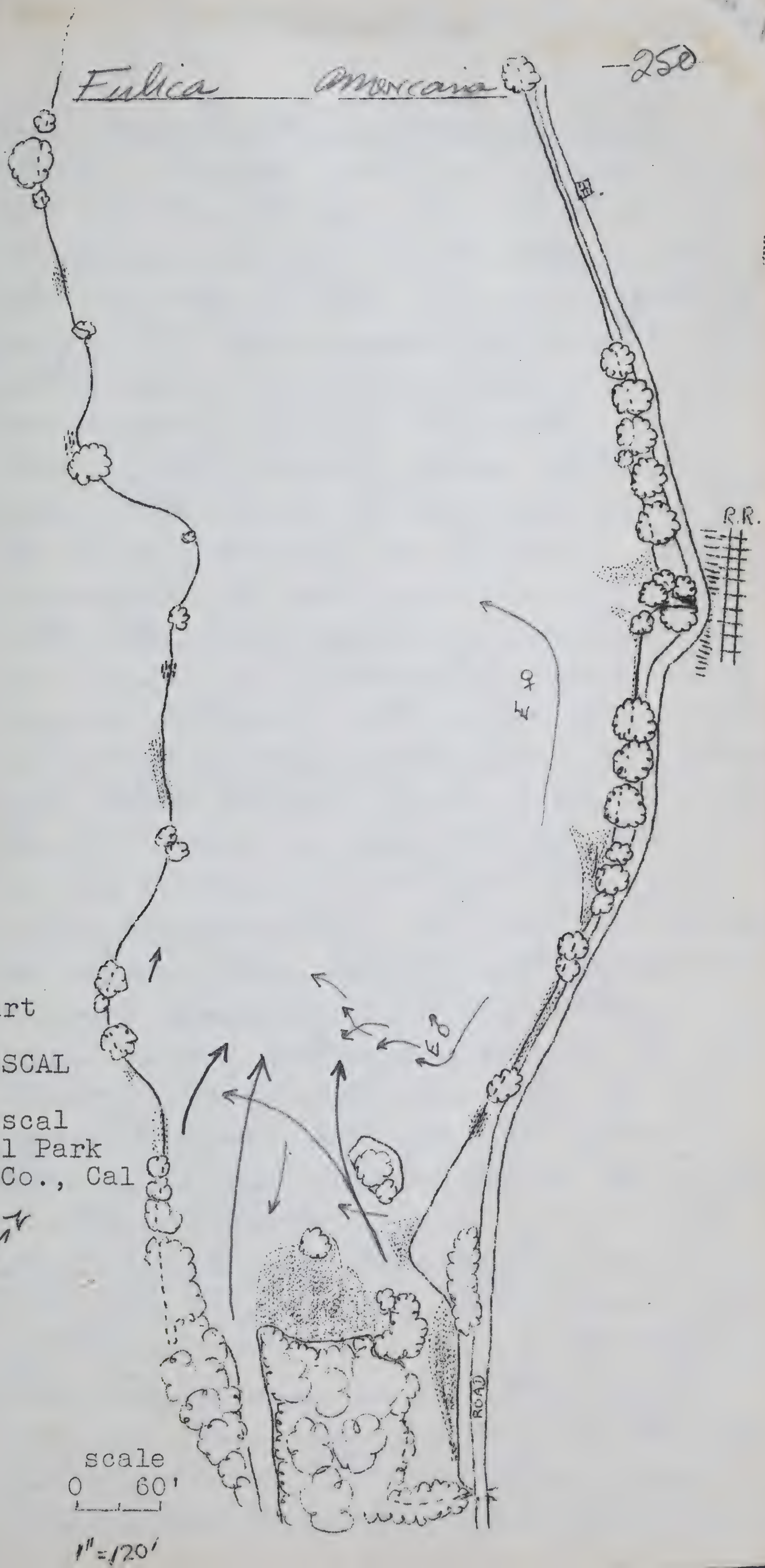


ULLION
1950

Fulica Americana

-250

Mar 26



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

L. GULLION
1950

Mar 26 Lake Temescal 420 ft. Alameda Co Calif. -
shield. Another bird just chased from
+19 into S inlet by a ♂, SE ♂ at the
same time charged to J8, stopping there,
then a moment later, SE male spatted
from K7, chasing another bird to G11,
returning, he crowed twice while
swimming at J8. G/R, with 1 tag,
has a flat shield. Wire still on
from other tag. - A bird charged a ♀
at F10 chasing her to G11. She
"ponked" as she swam out but
the other bird gave no note. Now
10:55 a.m. after about 15 minutes of
noisy activity, all is quiet. 10:57.
SE bird charging out from K7, chased
all three tagged birds from J9 out
to J11. One of two birds feeding
at F10 moved out to G9, into
→ charging position but did not advance
at once, then late & started swimming
across towards H8, the other is
now semi charging across to J9.
Now 4 birds are moving in the
south area, all from the flock.
One just got chased out of the S inlet,
followed by a crow. Now a SE
bird is chasing them out from
J9. The E pair, are both around the
platform at P16.2, one on the platform,
the other feeding on cat-tail shoots
nearby. Now 1 has left and the other is
feeding alone. This platform does
not seem to be developing very much.

GULLION
950

Mr 26 Lake Temescal 420 ft. Alameda Co. Calif-
The ♂ was the one on the platform and feeding last, now he is swimming N. This pair, defending the area from about P29 to N35 surely don't have any nesting area, only a feeding area. Both have enlarged shields they are probably the birds moved down from the E end of the dam with the increased use of the beach there. They were first billing, the ♂ ♀ pair being heard from one bird. All the eggs in the nest at J6.5 are cold, no incubation yet.

Mr 27 same locality - 6 eggs in the nest at J6.5 - all cold. No eggs in nest at Q23.11 or at P16.2. The male crow may also be transcribed as a "cook-uh-ook, cook-uh-ook"

— Jewel Lake, 510 ft. Contra Costa Co., Calif-
Nest P25.7 with 9 eggs. Searched area H I 1-4 for nests, found none, also looked over area E H 2-4, too badly beaten down, no suitable nest cover. Must work I J 5 to 8, S nest must be in there.

Mr 28 ~~same locality~~ - At 5:05 p.m. as I approach the nest area on the dam, both birds of the N pair move into the area L 25-26, the ♀ "poonking" in a semi-charge position; as I move into the cat-tails they both make notes - "puhk" & "poonk". 9 eggs in the nest, all cold, no

V. GULLION
1958

Fulica americana

Ma 28 Jewel Lake, 510 ft., Contra Costa Co., Calif. — incubation spot.

Ma 29 Lake Temescal, 420 ft., Alameda Co., Calif. — ♂ ♀ on nest 16.5 — slightly warm, suggesting some incubation, bird was on or near nest. ♀ went to J 7, beside the willows, and churred several times gave a low "poonk" a couple of times. Weighed four eggs, #1, 2, 7 & 8. Now, about 10 minutes later, one of the birds is venturing into the vicinity of the nest, carrying a bill full of cat-tails as it moves by the nest. One pair were seen billing together at about I 18. Then they crossed to the cat-tails at F 18 to feed and putter around. A little while later a bird was chased out of the cat-tails at I 7 by another bird, the chase went as far as I 12.

— Aquatic Park, s.l. Berkeley, Alameda Co., Calif. Six coots seen in the ~~refu~~ refuge area towards the S end of the park. 10 more in refuge area. A total of 16 birds on the lake.

Mar 30 Jewel Lake, 510 ft., Contra Costa Co., Calif. — When I arrived 5 p.m. the ♂ ♀ was near G 19 heading towards her mate at G 11 — as she moved S. M came out of the cat-tails at L 22, swam to G 18, and charged and then splatted to F 11. There ♂ ♀ & M went into paired display while ♂ ♀ was nearby in charge position. After about

GULLION
950

Mar 30 Jewel Lake, 510 ft., Contra Costa Co., Calif. – 2 minutes they broke off the S ♂ going to H11 the N ♂ drifting back to the island. 10 eggs in the nest at P25.7, 10th probably laid on the 29th. Eggs slightly warm, at least, not chilled, suggesting at least some incubation. Parent birds showing now particular interest however.

Mar 31 Lake Temescal, 420 ft., Alameda Co., Calif. – Sure violent disagreement among birds today at 5 p.m. Most of it centered around about I 12, but other battles were observed at I 8, and generally all over the area from H to L-10 to 13. One bird chased a bird from L11 to K 16 (now paired display, and a severe fight at I 8 Both males in it, and the ♀ from SW area trying to get in. SW ♂ on bottom most of time, when they broke off, he the loser, the SW ♀ ~~tried~~ started to attack him, belatedly, the SE ♀ came out of K7 joined in paired display, broke off with typical procedure – then a chase at L11 – SE ♂ came out to chase the birds out to L12 – the flock seems to be trying to wedge in a territory – then E ♂ ♀ came flying from Q21 to M12 to charge and drive the flock out of the area there the SE ♂ drove these birds to J10 – there seems to be a general upheaval in progress, I can't tell who's

ULLION
1950

No 31

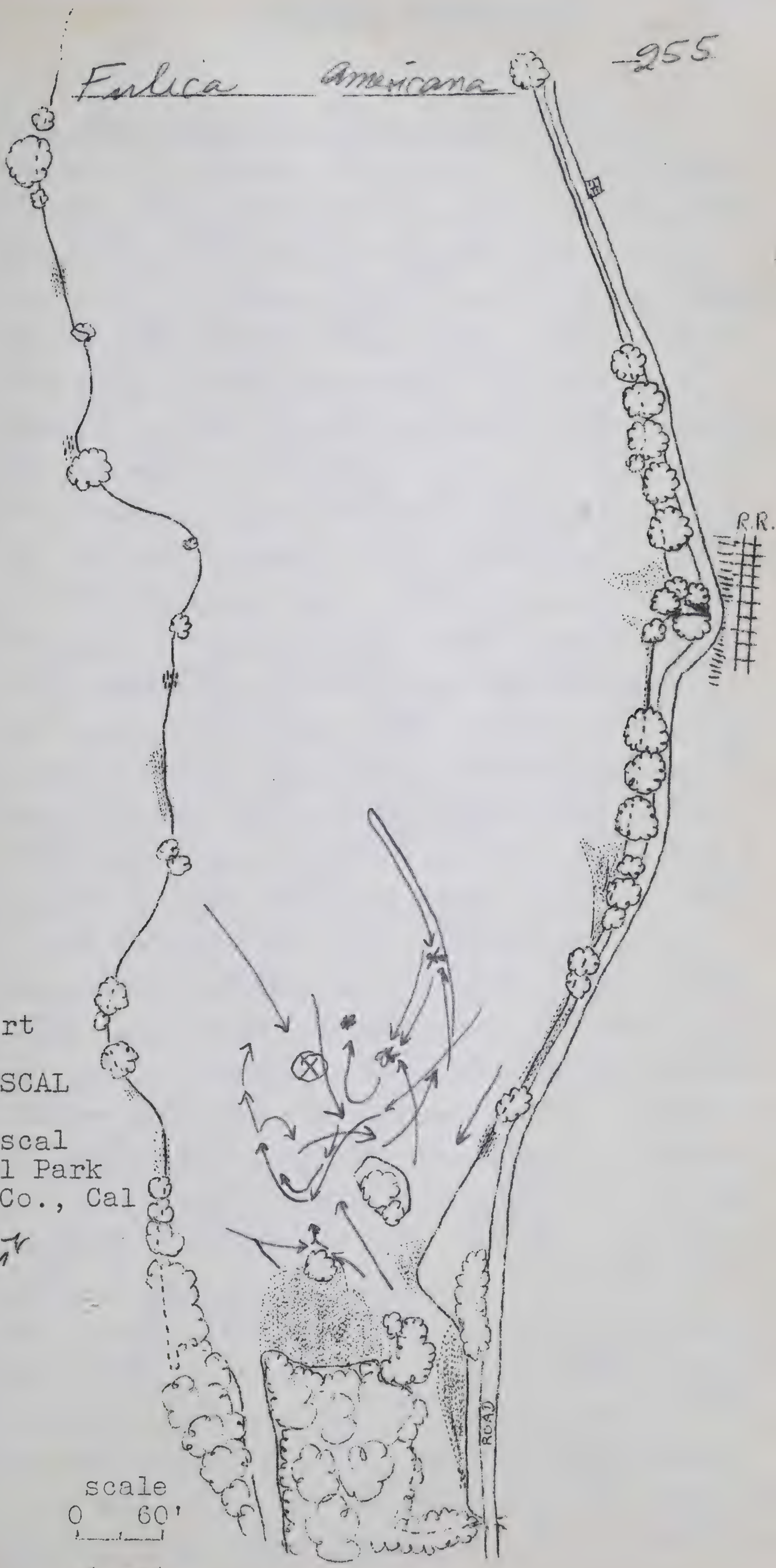
Fulica Americana

255

south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail



GULLION
250

Mar 31 Lake Temescal, 420 ft., Alameda Co., Calif.-
invading whose territory. SE pair seem
to be defending pretty well, but several
battles between outside birds are
occuring as deep as H 9 in SW area. Once
SW ♂ attacked another bird, hitting it on
the fly, SW ♀ came out to aid and
joined in the fight, quickly they repulsed
the invader - he flew - (now a chase at I 14)
to escape went about 20 feet before
he was hit again by the SW ♂ with the
SW ♀ joining in, the invaders mate
(a pair ?) came to his aid, and quickly
the battle broke up into display
at about I 11. The chase at I 14
just above finally ended up with
one bird chasing the other thru
the air from about I 15 to K 26.-
back to the chase on page 254- the
bird chased to K 16 turned on its
pursuer, they fought at L 14, then
the pursuers mate (pair ?) came out
to join him, they billed and dabbled,
then the pursued came in, the pursuer
displayed and the pursued arched as
it passed, but quickly turned to
chase the pursers mate (just now
the E pair flew from M 11 to O 24
in order to repulse a bird moving
in there) charging and attacking her,
with the aid of the pursuer, then
a moment late both the pursuer
and his mate turned on the original
pursued and chased it out of the

BULLION
1950

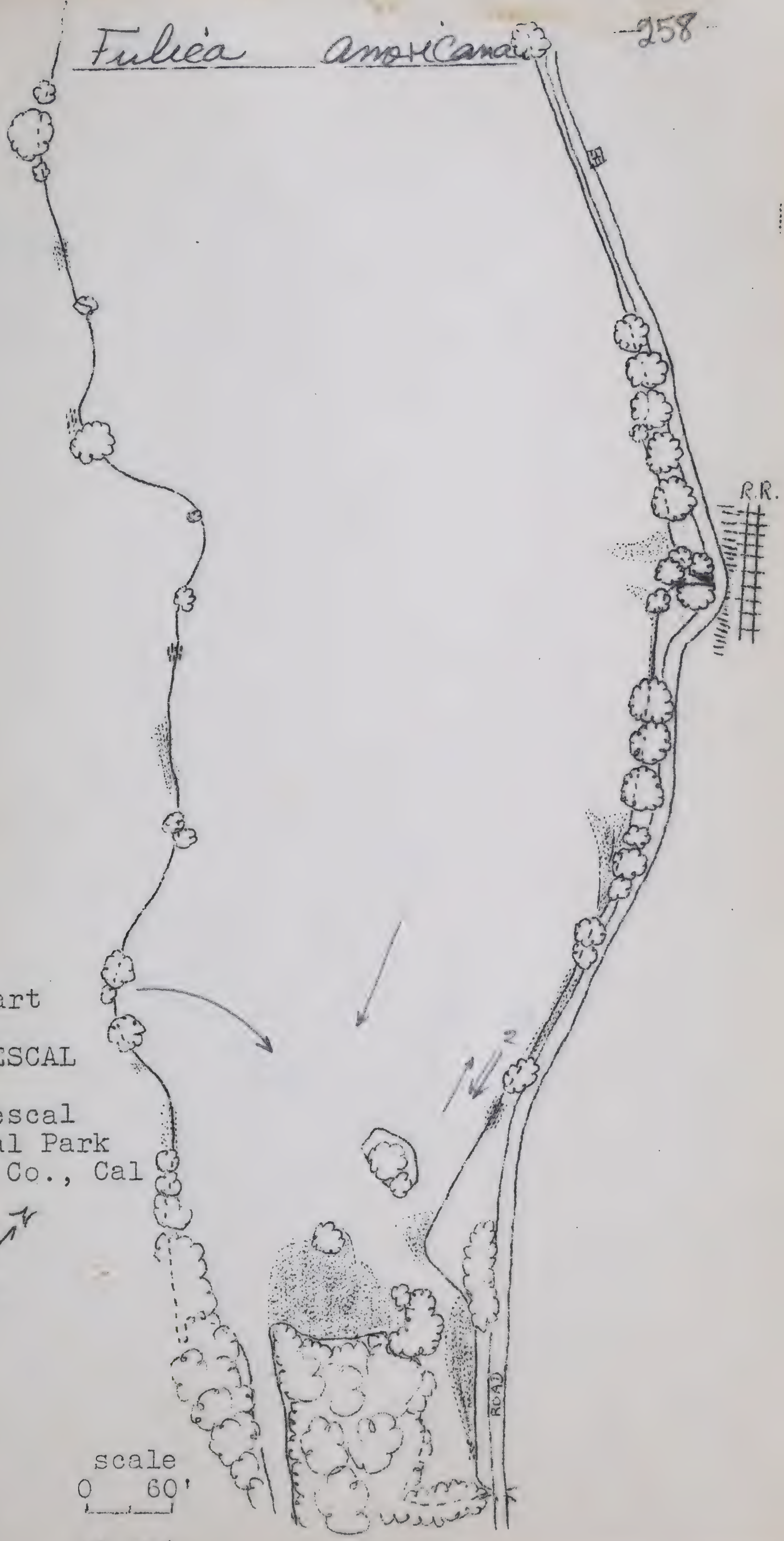
Nov 31 Lake Temescal, 420 ft, Alameda Co., Calif. —
area towards the north. Hear the
S ♀ consistently giving a "cooah", coo-ah"
note after a battle. Also a nervous
"puhk-cowah" from several males.
The trouble seems to lie in the
W pair and probably the N pair
trying to find good nesting sites
at the S end of the lake. Also some
of the flock may be trying something
of the sort, since some of the tagged
birds (3 of them) have been seen in
display a couple of times. Now
5:50, things are quite for the first
time since I arrived. But trouble
is starting - one bird at - I can't
keep track of all this - see maps 1-2-3
next pages - In nest J6.5 ~~egg~~ 8 eggs
and incubation is well under way -
both birds were nearby, the ♂ most
concerned - while I was still in the
area she took time out to chase a
bird from L10 to I11. - the ♂ at
L8 crowed, and she returned to one
first, he right behind.

Nov 1 same locality
10:49 a.m. ♀ just charged w/Bl,
chasing it from K10 to J13. Some
chasing is going on in the area
K-M 10+11. The E pair were just
copulating, at Q23.13. They were
out of the water, standing on a
mass of floating cat-tails. Couldn't
see many details from where I am.

ULLION
1950

Fulica americana

-258-



1 5:51

south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

N
W
E

scale
0 60'

1" = 120'

ris
at-tail

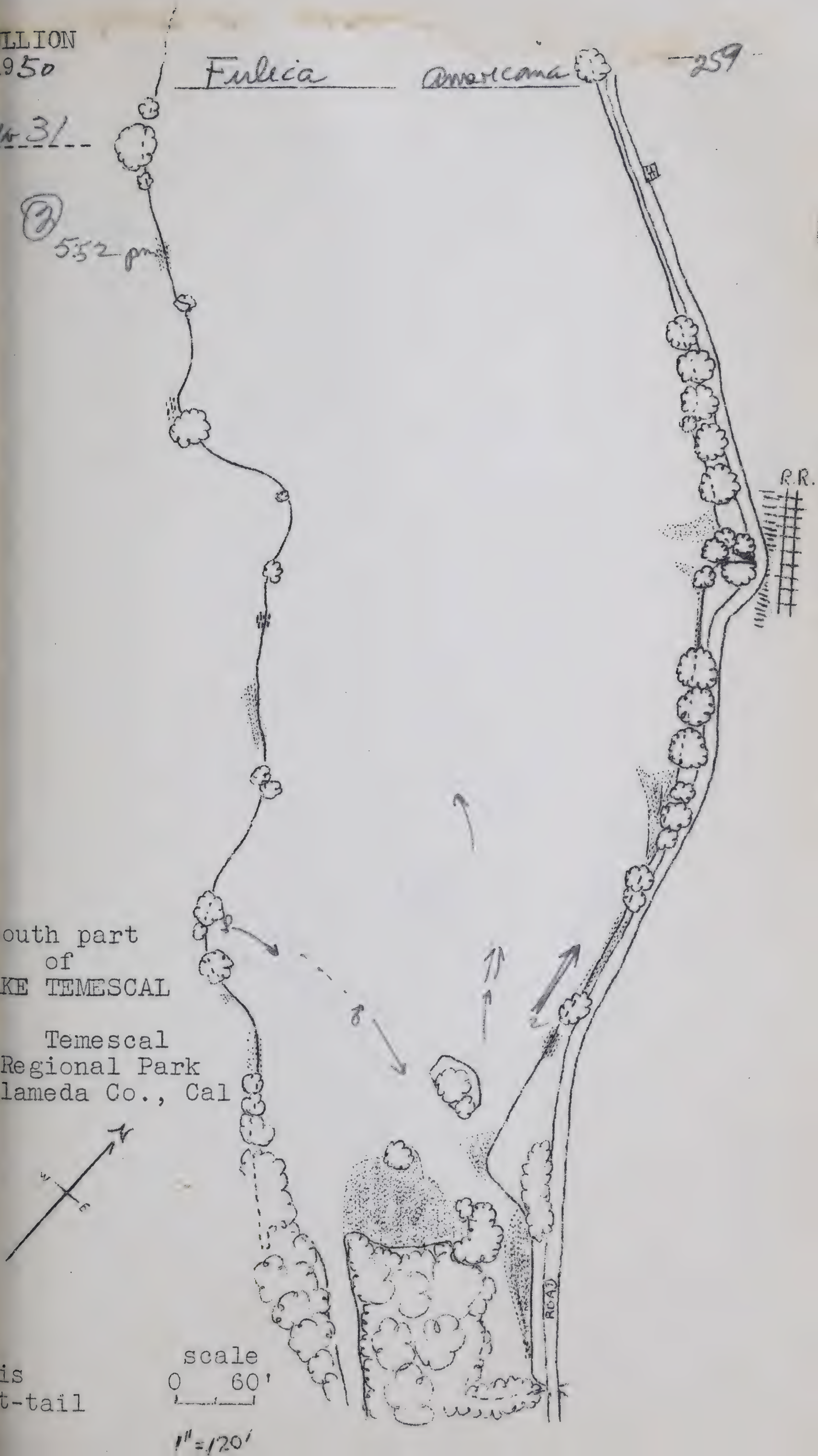
ULLION
1950

Fulica americana

259

No 31

(2) 5:52 pm



south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

scale
0 60'

1" = 120'

JLLION
1950

Mar 31

(3) 5:53 p.m.

Fulica americana

260

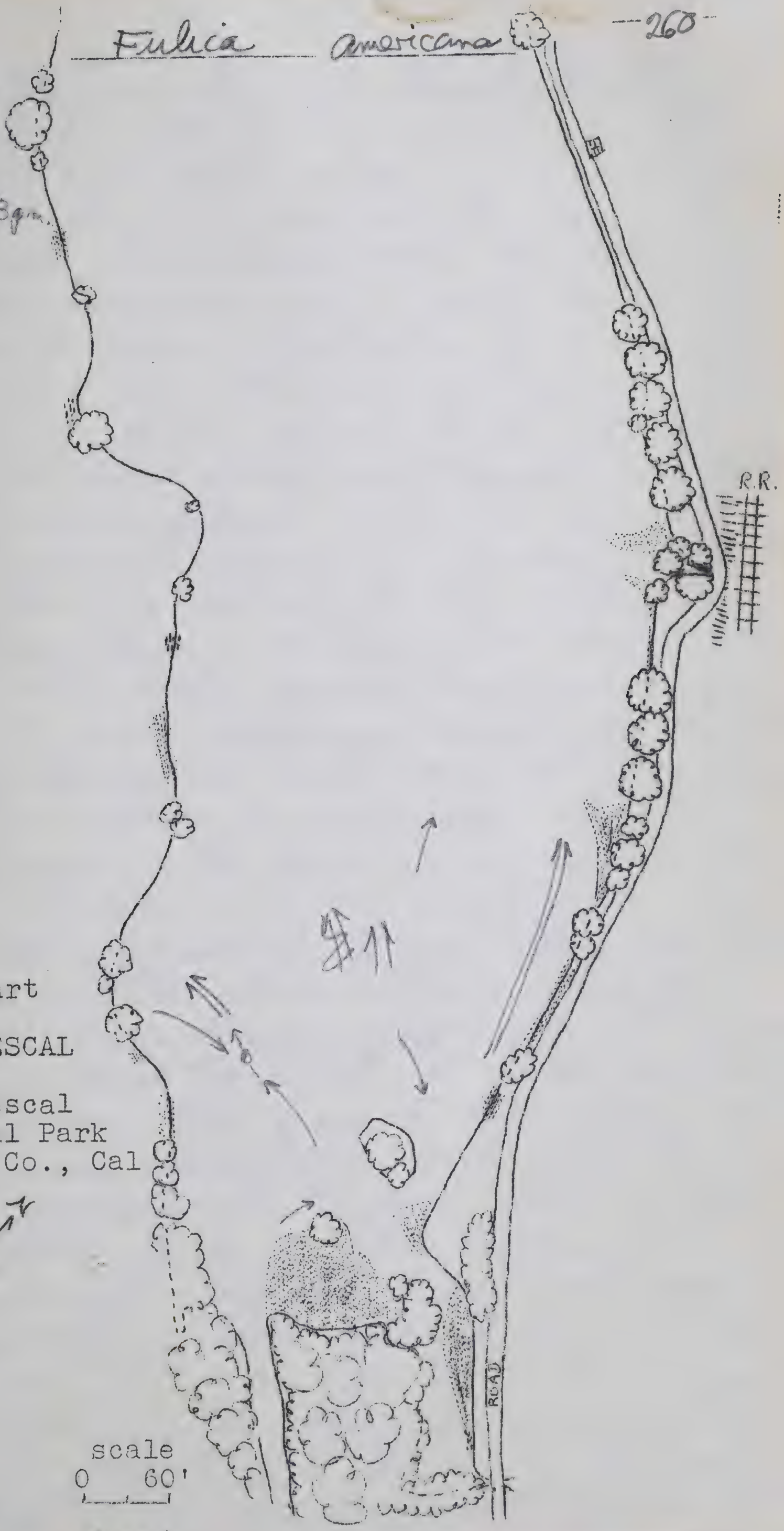
south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

scale
0 60'

1" = 120'



Apr 1950

Apr 1 Lake Temescal, 420 ft., Alameda Co., Calif. — A chase seems to be underway from K7, at least birds out at KM 11 are alerted. Mostly very peaceful this morning. All territorial birds seem to be on or near core areas - just now a SE bird came out, chasing bird feeding at KM 11 - then it cut across from L10 to hit at a bird at I 8, the hit bird dived, but quickly surfaced and displayed, with its SW mate quickly joining it, forcing the SE bird to retire into the willows to display. 11:03, two birds clashed at M10 - and a general mixup is coming, 7 birds charging or displaying at L10. Two several birds are in charge positions as chases are underway. - see 11:05 map - w/BC made of vicious jab at G/K once at L10 - another bird charged out to O/S and they bantered a little, some billing. Just now 11:10, a 4 way fight at L10 between birds of the flock, E pair came down from their area to M11 before SE & came splattering out, first to repulse the E pair, forcing other bird to do it, then turning to route the flock out onto open water. One chaser went as far as I 18 - but participants unknown. Think the chaser was an E bird. W pair had to do some defense at H17. The W ♀ is at E14, in the

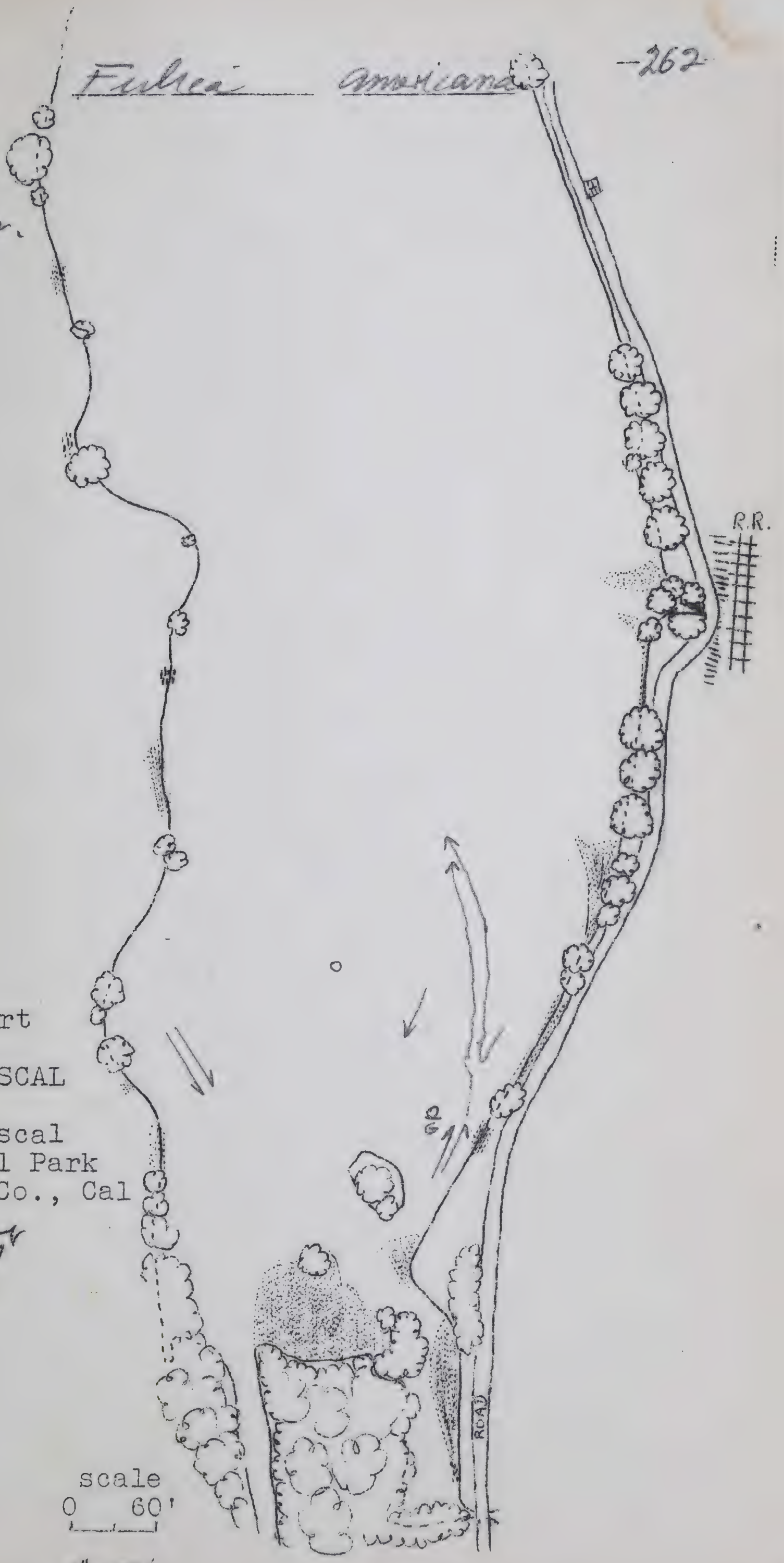
ULLION
.95

Fulica americana

-262

pr 1

10:43 a.m.



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

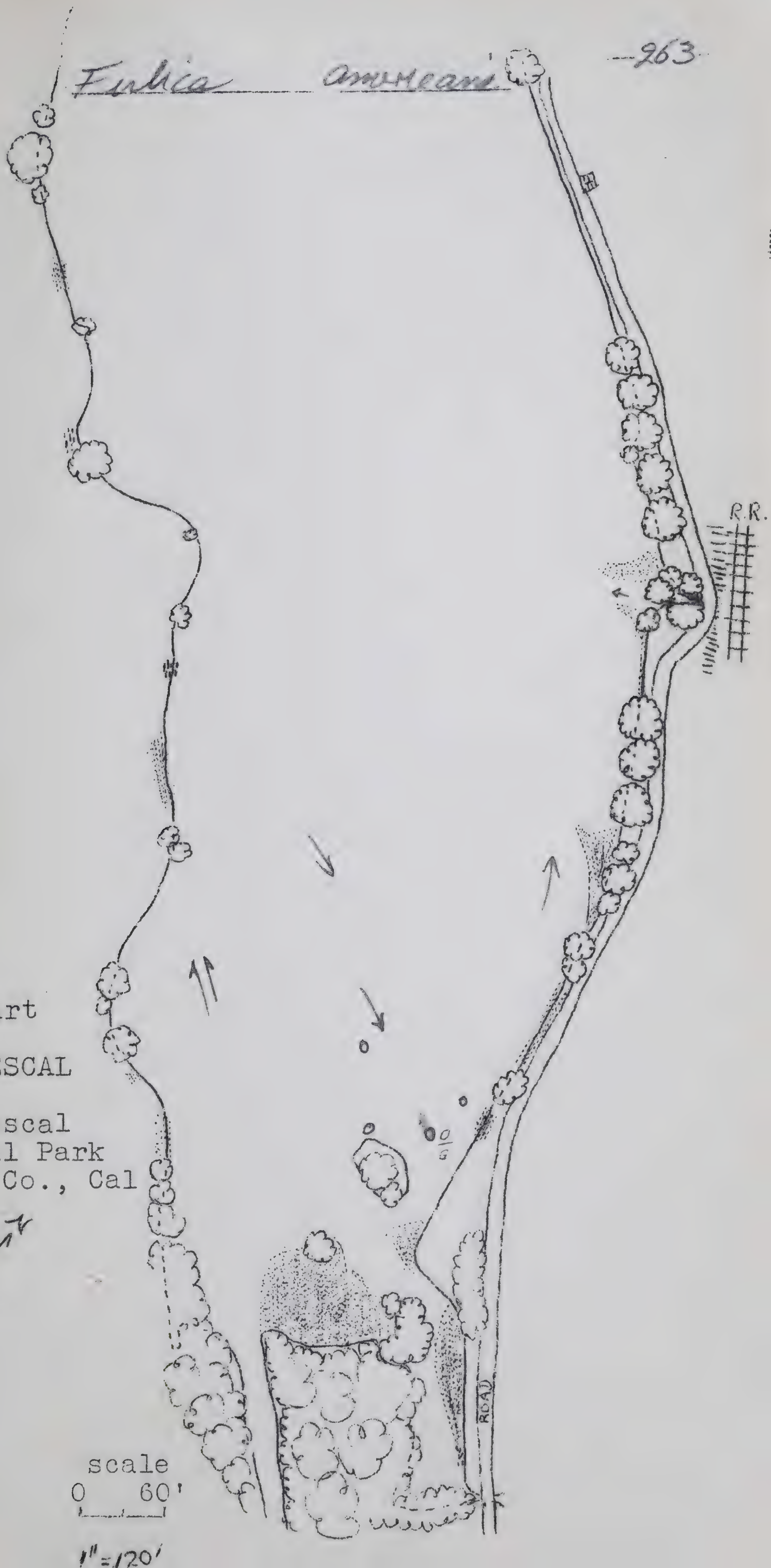
ULLION
1950

Pac 1

10:45

Fulica americana

263



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

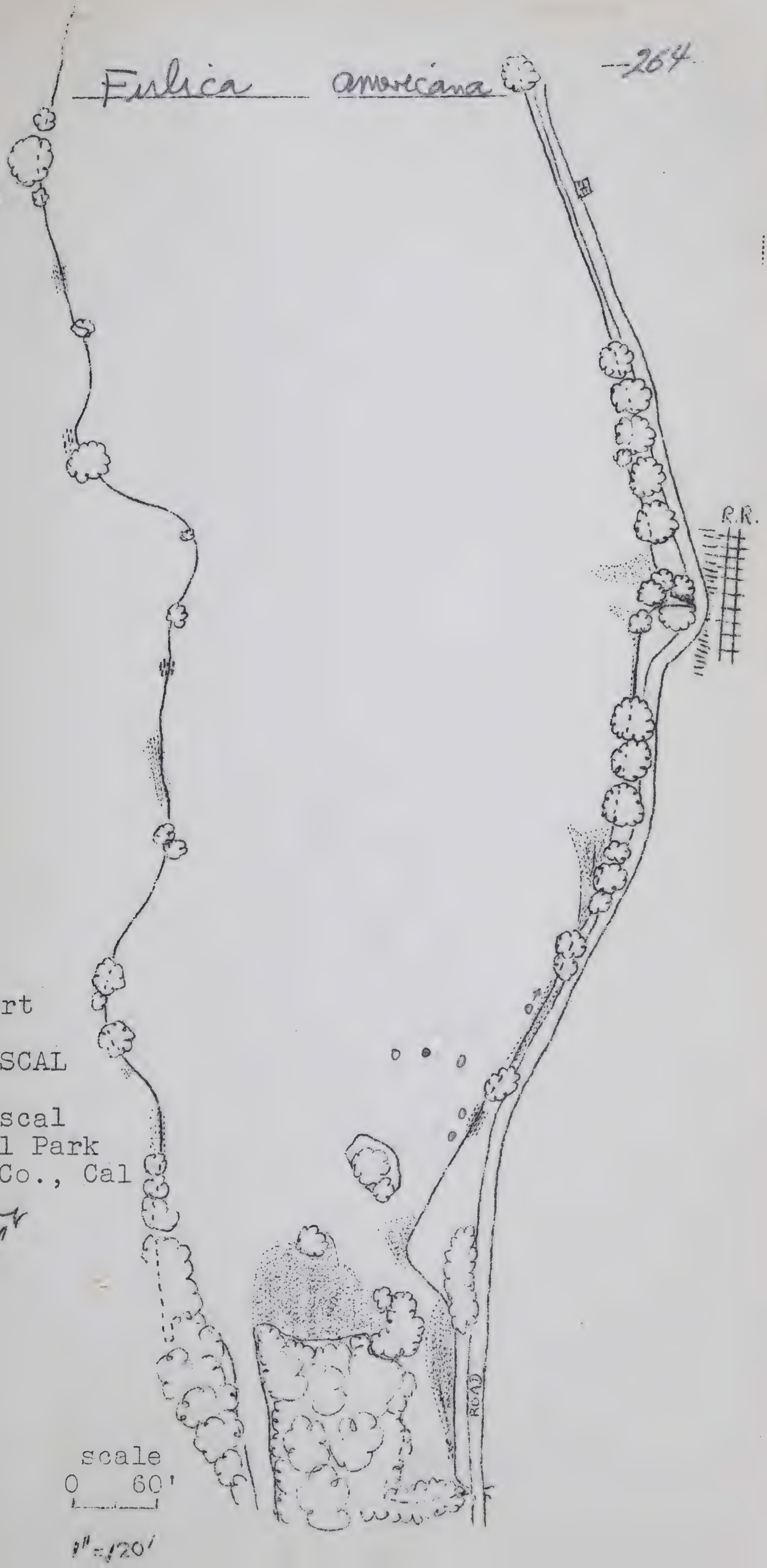
ULLION
.950

Fulica americana

-264

Par 1

11:05



outh part
of
KE TEMESCAL

Temescal
Regional Park
lameda Co., Cal

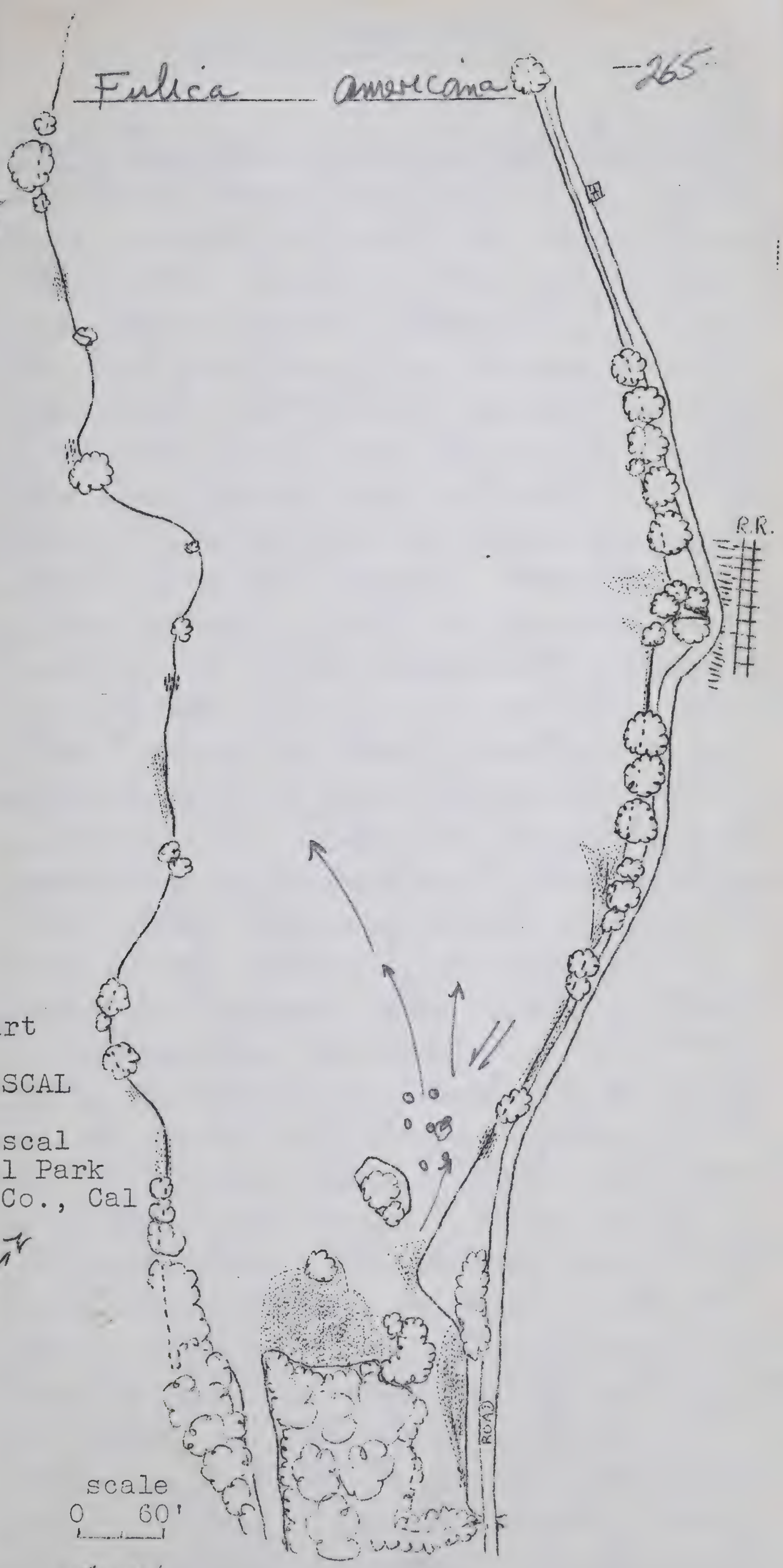
is
t-tail

LLION
.950

Fulica americana

-265

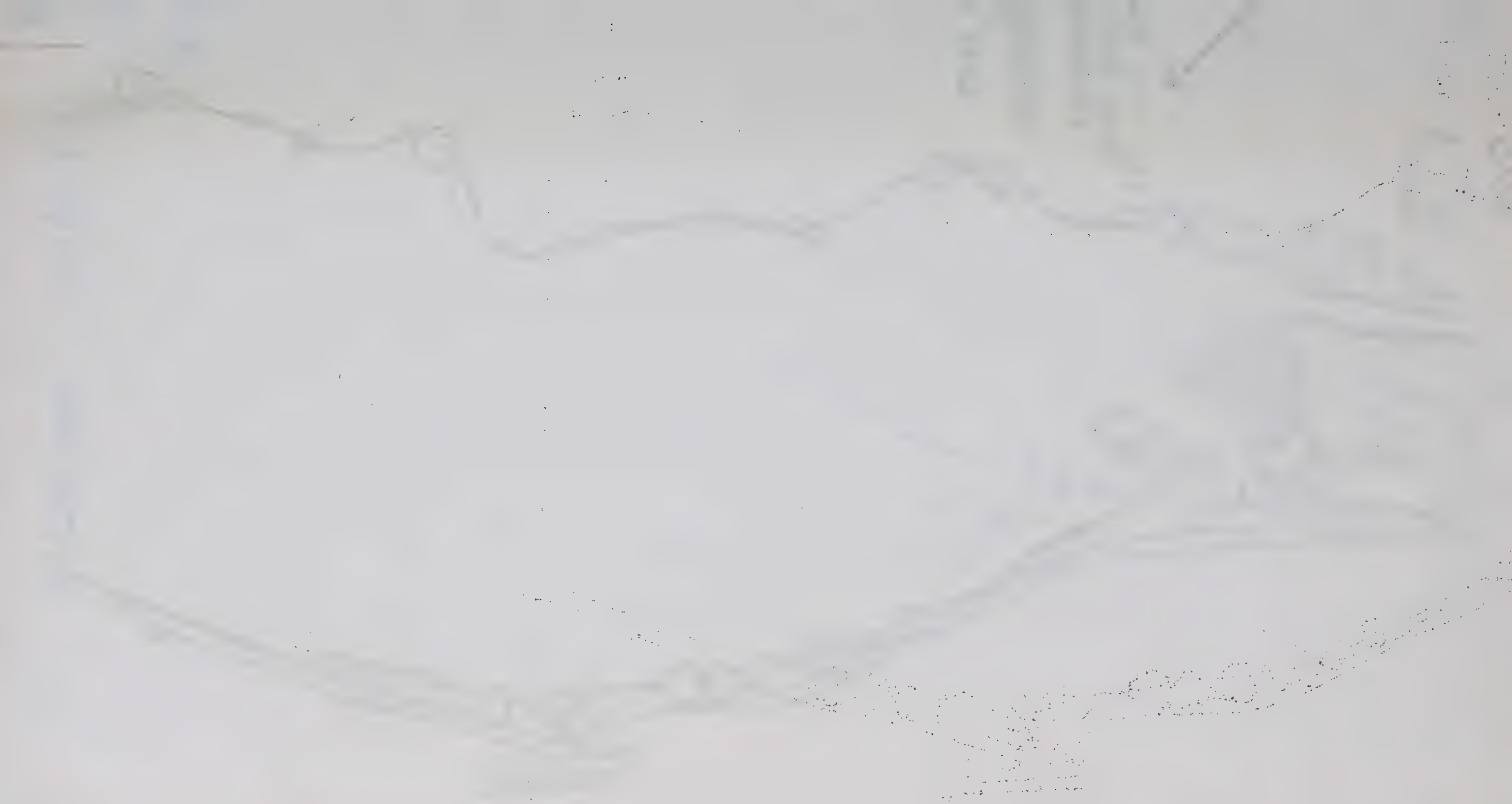
eril/--
11:08



outh part
of
KE TEMESCAL

Temescal
Regional Park
lameda Co., Cal

is
t-tail



ULLION
750

Apr 1 Lake Temescal, 420 ft., Alameda Co., Calif. - willows ~~trying~~ "poonking" to her mate who is swimming out from there towards the rock. Now 11:20, 4 birds are maintaining an alert truce at IJ 12-13. One bird venturing to L10 was quickly repulsed. It looks as if two birds from the flock are trying to build a territory based on a core at M10. They seem to be trying to defend against bird from all angles, mostly other flock birds, but are quickly routed when SE birds come out - I may be mistaken tho. 11:35 - watching from the trail above the lake - could see a pair defending M10 another bird moving out of J7. The SE bird charged, chasing a W bird and flock bird from K10, then turning back against the M10 birds. Now 11:40 everything peaceful again. One of the W birds working over to NW corner of rock, got into charge pos. and gave a "puhk-huh-kuk" while facing his mate at H12. A moment later SE bird routed (see map 11:43 am p. 267) 3 birds from L9, chasing one to H17, returning thru W area, the W pair charged up to intercept, but only a paired display by all 3 birds at H12, as SE bird returned to chase one of the 3 further out from K10. Now 2 birds working down along W side of island, on to willow at I 8, when a SW bird came out,

ULLION
1950

April 1
11:43 am.

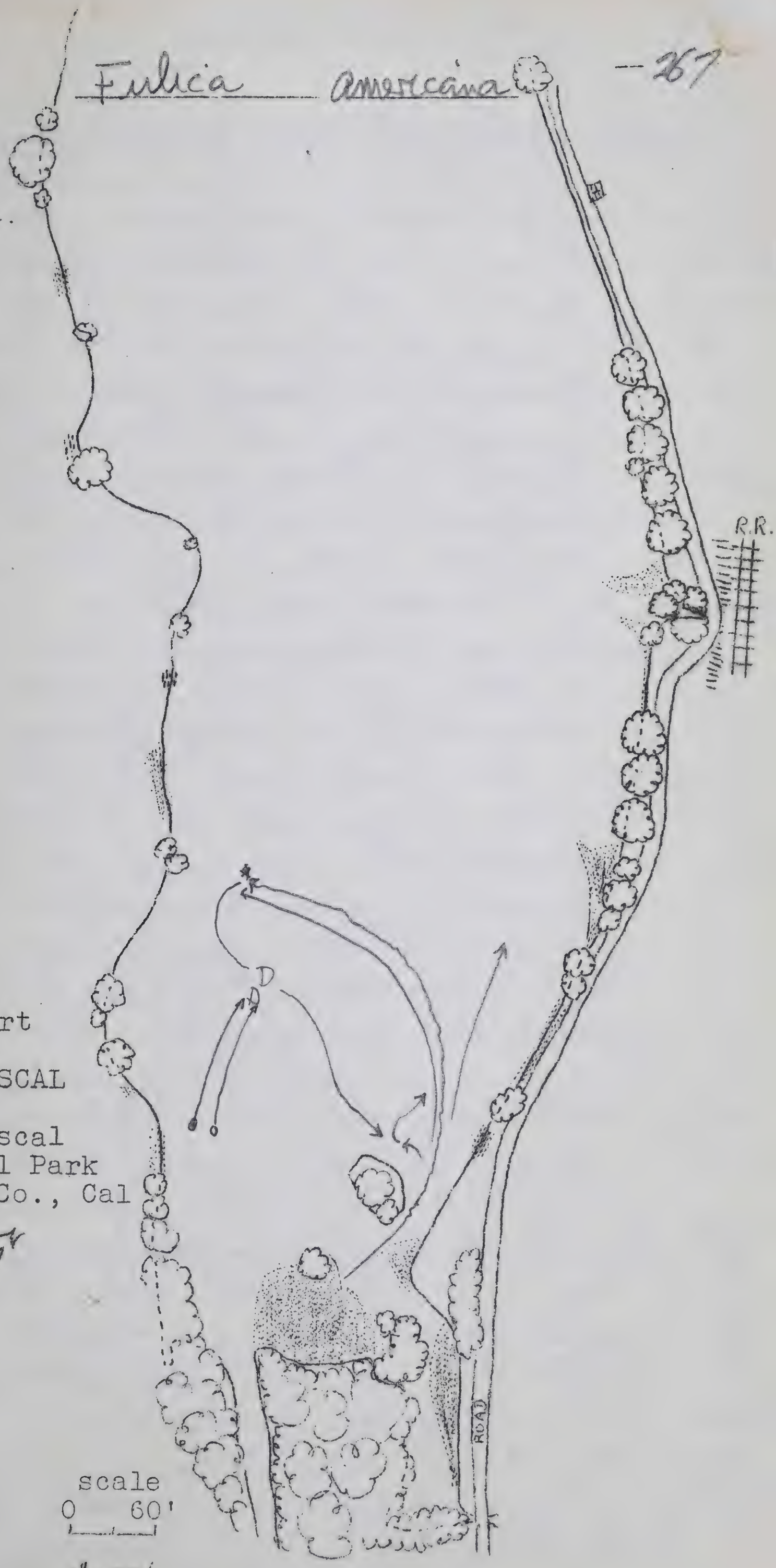
Fulica americana

-- 267

south part
of
AKE TEMESCAL

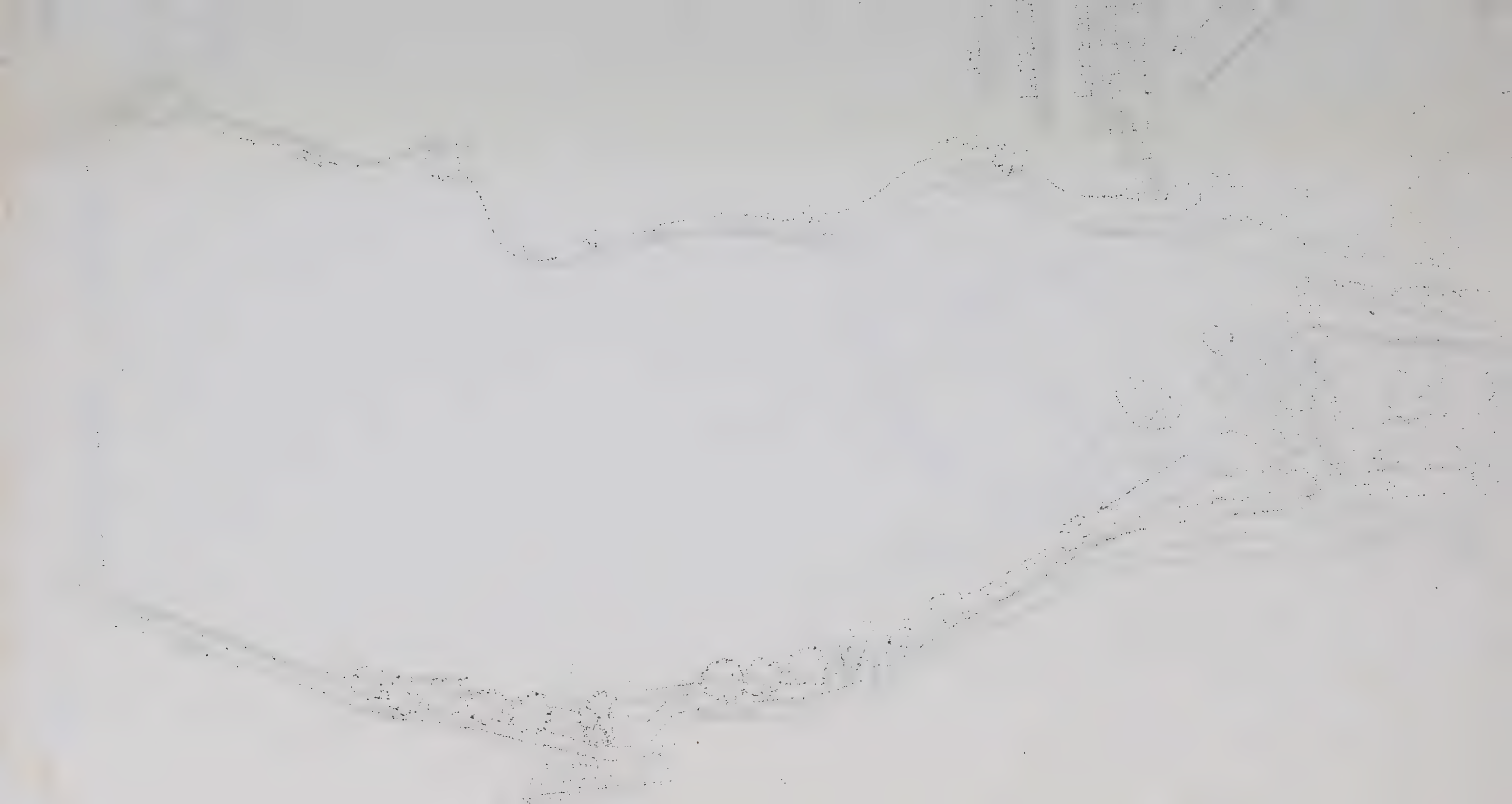
Temescal
Regional Park
Alameda Co., Cal

ris
t-tail



scale
0 60'

1" = 120'



ULLION
950

April 1 Lake Temescal, 42 ft. Alameda Co., Calif.—
Chasing one as far as NW corner of Rock, then moved over towards at bird (ruddy duck, it dived) at H10, and then returned to its cove area. Now 2 birds are feeding at H7, a momentary display. W/Bl at E17 was chased out by another bird. Nest at P16.2 photographed in BW & color with telephoto. It seems to be quite well developed now, with some dead material woven in. The male seemed to be showing some concern about my presence. Nest at Q23.11, or rather environment, photographed in BW & color. Looked at this nest from the bridge, didn't see any eggs and don't think there are any. Photographed one of the willows showing a browse line, specifically the tree at O35. G/R first got chased out of E~~G~~17 to H17, the chasing bird returned to chase W/Bl from G17 to G18. A bird from SE area first chased two birds away from the N side of the rock, one being chased to about I12.

— Jewel Lake, 510 ft., Contra Costa Co., Calif—
A bird crowing at G15, got no response. Another accompanying bird has come to F11 to dive & feed, while the other bird works S along the cat-tails. Now one of them is resting on a stick at H11 preening, while the other feeds

Fulica americana

April 1 Jewel Lake 510 ft., Contra Costa Co., Calif. - nearby. Since another bird is feeding at L24, I guess these two birds at H11 are both S pair birds. The S pair have doing a lot of billing etc in the area. EF 11-12. Haven't seen any copulation yet. Found nest P27.7 raided, all but 3 eggs completely gone. Recovered two eggs with big pieces missing, the 3rd egg was undamaged. The nest was somewhat messed up. The N ♀ seems to be absent from the area also. I have seen only one bird in the N area this afternoon.

Ap 2. Univ. Calif. Campus, Alameda Co., Calif. - Photographs made of syrinx of ♂ 76 ♀ 46. Head of 600861 photographed. LG/Br, no change in shield, testosterone pellet still present, distance from tip of bill to top of shield 40 mm - shield compared with photograph of 3/17/50. wt 503 gms.

GULLION
1950

Fulica americana

270

Ap 2 Univ. Calif. Campus, Alameda Co. Calif. -

Lw, the bird that died March 17, 1950, showing flat shield of estrogen.
P/LG - shield about the same as earlier, may be a little more swollen but not a whole lot. Otherwise no change. wt. 489 grams. Silvered ~~bird~~ pin has

Fulica Americana

Apr. 2 Univ. Calif. Campus, Alameda Co., Calif. — caused no tissue reaction, but it seems to be pretty loose in the skin. I'll see how it holds up. O/Bl. — shield same as on March 17, 1950. Couldn't find the estrogen pellets for sure. Wt 415 gms. Had to put staples on the tags over the worn wires. Tip of bill to top of shield 43 mm.

O — shield very much enlarged from March 17, 1950 — (see comparison page 288) But otherwise bird about the same. Weight — 495 grams. Plastered the top of its head down with Duco cement. Y/LB apparently a considerable decrease in shield size. No longer 5, but only 55, about class 3 rather than class 11. Photographed. see page 289 Wt. 497 grams. Other birds put back, to finish tomorrow. P/LG turned into the pond. With the others.

J. GULLION
1950

Apr 2 Stow Lake, Golden Gate Park, San Francisco, Calif.
Only one coot, that with swollen shield at west side of island - a second heard a moment later, and seen. About 12 coots on & N side of island W of bridge. 6 coots near the small island E of the big one and about 15 coots scattered over the rest of the area east of the island. No tagged or scared birds seen. Some displaying among the birds N of the big island.

— Albany, Alameda Co., Calif. —
About six coots seen feeding in the Salicornia just south of the mouth of El Cerrito Creek this morning

Apr 3. Univ Calif Campus, Alameda Co., Calif. —
Of last weeks green food — the swiss chard and grapes have apparently not been touched. Almost all of the lettuce is gone but much of the carrot tops are still present. Some clover put in the area has not been touched, but some grass that was with the clover was carefully selected out and eaten. ♀R - shield 6 5 - photographed B/W & color. Legs yellow green, temper mild. Wt. ____ grams. Painted this birds bill and shield with a bright red nail polish - to see what effect it has, and how long it lasts. Photographed p.346 B/W and color p.346 but weighed, shield

I. GULLION
950

Fulica americana

Ap. 3 Univ. Calif. Campus, Alameda Co., Calif. –
flat, class 5. X/C, photographed, shield

seems to be down from March 17, 1950
Temper still bad, weight 585. grams.

—

—

. GULLION
950

Apr 3 Univ Calif. Campus, Alameda Co., Calif. — Br - shield 855, weight 399 grams. Br, X/R, O/Br into pool with others. — All four of the released birds are staying over near the pen, not mixing with the birds that have always been loose which are all under the ferns. W/B seen nibbling with O/G while G/Bl sat nearby on the nest. The red billed bird doesn't seem to elicit any particular response from its mates, seems to be fully accepted. — The bird 600861 partly dissected today. Found much fat on body, this bird was in beautiful physical shape. Gizzard contained grit but no food. Examination so far has not definitely established cause of death. Trachea contains a reddish substance, suggesting some disturbance of the respiratory system. Age at least 10 years 10 months (see next page).

Apr 5 same locality This morning in the courtyard things are really happening. In the cage O was busily chasing and attacking Y/LB and Br/LG, grabbing them at every opportunity. Outside the cage O/G is chasing G/Bl and all the others except W/B, W/B is especially concentrating on P/LG, defending her territory. P/O and red billed Y/R seem to be about the

L. GULLION
250

Fulica americana

275

Band No.:
40-600861

Reference:

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
PATUXENT RESEARCH REFUGE
LAUREL, MARYLAND

March 30, 1950

Mr. Gordon W. Gullion
Museum of Vertebrate Zoology
University of California
Berkeley 4, California

Reference is made to your letter of 3-24-50 regarding a bird wearing a band with the above number and which you report was: Found dead - cause unknown at present - autopsy to follow.

on: About March 20, 1950

at: Lake Merritt, Oakland, California

and:

Our information on the banding of this bird is as follows:

species: Coot age: sex:

banded at: Lake Merritt, Oakland, California

date: November 16, 1939

by: E. W. Ehmann

On behalf of this Service and the bander may we thank you for your cooperation in contributing this information to our studies and investigations of the migrations and life histories of the birds of North America.

Very truly yours,

Seth H. Low

SETH H. LOW, *Biologist,*
Section of Distribution and Migration of Birds,
Branch of Wildlife Research.

cc: Ottawa, Canada

Was band submitted and number verified? Yes

Band was filed: Yes returned to reporter:

This report prepared by: gmd

SEE REVERSE SIDE

3-624
Dec. 1949

16—60731-1 GPO

Fulica americana

Apr 5 Univ. Calif. Campus, Alameda Co., Calif. – only birds not being persistently chased. Twice W/B and once O/G came over to attack the birds in the cage. O displayed opposite O/G once, but O/G did not reciprocate. Very noisy. Lots of "punks" from O/G and G/Bl and "punk-unks" from W/B. G/Bl just attacked and thoroughly cleaned up on Br in the water, having Br under water for a moment. O/G and W/B came in side by side to participate. I think G/Bl is losing out to O/G so far as W/B is concerned. The red billed bird is being ignored in these territory disputes, but W/B and O/G are chasing all other birds. P/O is showing some "nesting"? interest in a clump of grass like things growing at the E end of the area. Now W/B and O/G are in the pool together chasing any other bird that dares enter. G/Bl shows interest in W/B but everytime he tries to get to her O/G cuts him off. Now O/G and O are peching at one another thru the wire. Now W/B and O/Be are doing the same. O is carrying a piece of material around the cage. W/B chases O/Br right by P/O without showing any antagonism for the latter. These birds are going today despite people in the courtyard or looking out of windows. They are rather unconcerned

. GULLION
950

Ap. 5 Univ. Calif. Campus. Alameda Co., Calif. — about the external enviroment. I haven't seen G/Bl have any chance to settle on the nest. He ~~se~~ cleans the pool out when O/G isn't in it W/B just chased red-bill Y/R. P/O is carrying cat-tail leaves from the "nest" to the corner, W/B slapping her foot on the pile of leaves. Br chases O/Br. G/Bl trying to settle on the nest was chased off by O/G. W/B standing near the nest in an arch, punking in a low voice, and occasionally slapping her foot. Y/R swimming in the pool and vigorously feeding on numerous insects floating on the surface. Now all is quiet. 8:20 — this section started about 7:50 a.m. O/G, G/Bl, W/B O/P all resting in SE corner, joined Y/R, Br, ~~O/Br~~ Br/LG in S center, the other one must be over in the SW corner. O/Br. In the pen P/LG is consistently pecking W/LB as it gets the chance. O/Br was in the cat-tails rather than the SW corner. O/G sure has yellow legs, ~~the~~ and G/Bl has yellow green legs. Whenever O starts mixing it up in the pen the birds outside immediately get aggressive and start chasing and making noises.

2 on
3 on
4 mm
4/5 FT

V. GULLION
950

Ap. 5 Lake Temescal, 420 ft. Alameda Co. Calif.—
O released at K7 at 4 p.m. Very shortly after one SE bird jumped it but didn't engage long. O dived, but did not leave the area, a moment later O swam into the cat-tails at ~~O~~ I7. One pair seem to be ~~be~~ quite peaceably occupying the area LM9-10. A bird is incubating the nest at J6.5 - also it looks considerably built up. Things seem unusually quiet today. Haven't even seen any tagged birds yet, or the flock. W pair are on territory, one is feeding on weeping willow leaves at E12. A SE bird just came out from J7 to chase the M♂ to K13, then as the M♀ cackled at K10, SE bird returned to chase her to I11, and then retired. A minute later both M birds were drifting back into their area. The SW pair, the E pair and the W pair are all on territory. The ~~SE~~ SW♂ was just crowing as he approached his mate at F8 while the W pair fed at F11. 6 birds of the flock are feeding at MN32-35. The nest at P16.12 is considerably built up, maybe going to have eggs soon. The affair at Q23.11 seems to have been converted from a nest to a platform and is now loaded with fecal debris. 3 tagged plus 1 scared bird feeding (+1 other UNM) at

N. GULLION
1950

Apr 5 Lake Temescal, 420 ft., Alameda Co., Calif. - P29. No sign of N pair now. $\frac{O}{C}$ has an enlarged shield, w/Be has a slightly enlarged shield and G/R and (Be/W) have flat shields. The UNM has a slightly enlarged shield, 3 other UNM birds are feeding in the beach area. 2 more coots are in area F37 and north.

Apr 6 Jewel Lake, 510 ft., Contra Costa Co., Calif. - Two birds of the 5 pair feeding at B10 when I arrived 5:20 p.m. I worked the cat-tails from AC 11 to 16, no nest found but the birds indicated some concern. NO? came charging down from F26, then at about F23 veered off to its mate at E27. Checked that area DE 27 to 29, no nest, no concern shown.

Apr 8. Univ. Calif. Campus Alameda Co., Calif. - The old nest seems to have been completely abandoned, it is now just a loose pile of debris, but a new structure seems to be taking shape in the water. At least a bunch of heavier stuff has been thrown down and there is quite an accumulation of green cat-tail leaves. Legs on Y/G are becoming YG. Dr is busily working through the pile of grass I put out Thursday (Apr 6), apparently it is searching for insects. It is using its bill to move the grass and then looking

SULLION
1950

Fulica americana

280

Apr. 8 Univ. Calif. Campus, Alameda Co., Calif.- underneath. Some red is still on the bill of ♂R, but not much. Little evidence of territorial behavior since at least 7 of the birds loose as in the SE corner. Now Br is in three making 8 of 9, but P/O left to join Y/G feeding on the grass. Now W/B followed by O/G came over to feed, the other two birds moving away. W/B came on over to feed on some grain by the pen. O/G followed her. They fed for a moment with 1½ feet of a Brown Towhee, but after about 30 seconds W/B chased the Passerine out of the area.

— Lake Temescal 420 ft., Alameda Co., Calif.- w/Bl G/R and O/G all seen about noon. A SE bird charged into the pair at M/O - quite a paired display but both M birds were routed. They moved around to the SW side of the rock to make noises. There seems to be some conflict in the willows at I7 Just now w/Bl came down to I8, was deflected E by a bird there, was chased out to I11 by a SE bird while the M pair displayed at J9 and a SW bird at I7. The M pair moved N around the island to be attacked by a SE bird as they crossed at L/O - the chase going to I17 - M♀ came out always but SE ♂ rejoined her, in the

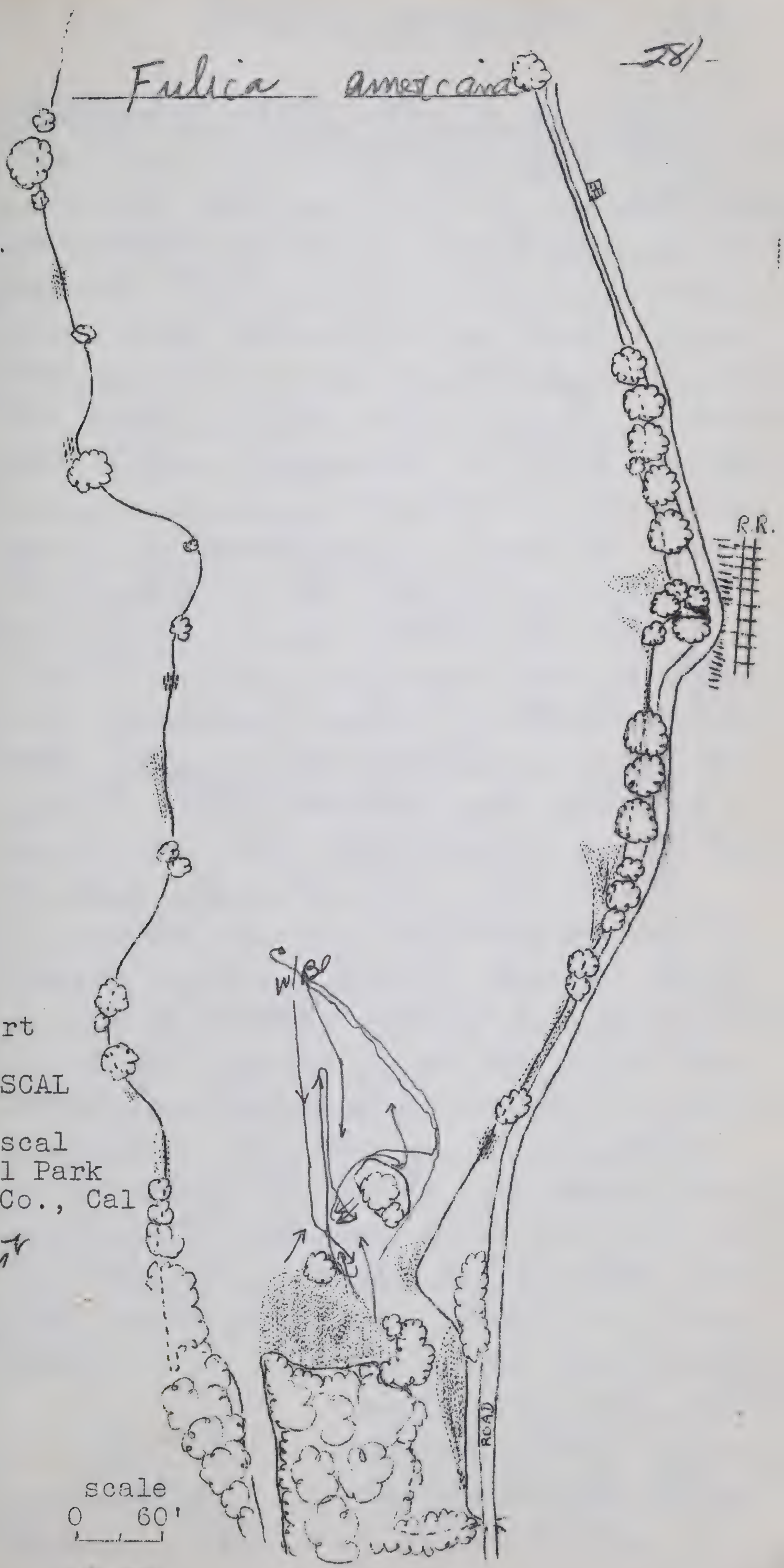
GULLION
1951

Ap. 8

12:33 pm.

Fulica americana

-281-



south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

N

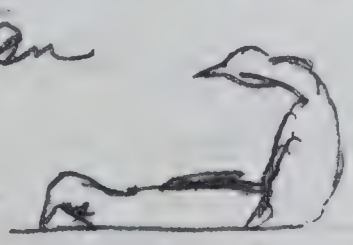
iris
cat-tail

scale
0 60'

1" = 120'

Fulica americana

Apr 8 ~~Lake~~ Temescal, 420 ft., Alameda Co., Calif. — Meantime SE ♀ came out to attack W/BO who had returned to K 8. O/G and UNM feeding unmolested at HI 2 - W/BO was doing the same at K 2 until a SE bird came down and chased it on land. Now as W/BO wanders around uncertainley on land the SE wists in the water nearby. Watched the E pair copulate at Q 23.13. Both were swimming at Q 24 - the female giving a ~~pook~~ "poonk" and the male a "pukk", the ♀ went up onto the cat-tails first, followed closely by the ♂. As she crossed the platform she remained silent, but arched and ~~sh~~ slapped the platform with her foot. Still arched she settled down on the platform, with her ♀ head under water. The male mounted her and starting giving a closely spaced kurk, kurk, kurk. He did not take hold of her, but gently mounted square on ~~his~~ her back, his head lowered and using his wings for balance. She by now raised her head out of the water, he reared back, apparently hanging onto her back with his claws, as copulation took place the intromission took no longer than 5 seconds, he dismounted and swam off while she ~~as~~ stood up and preened for several minutes before leaving. He went towards P16.



GULLION
950

Fulica Americana

Apr 8 Lake Temescal, 420 ft., Alameda Co., Calif. - The flock, 5 birds, is feeding at N37. There are two birds (N pair?) with swollen frontal shields and 3 (including ♀R) without. 1 coot at H2 is being chased still further up the inlet. W, SW, SE, M and E pair all on territory. Also a pair in the swimming area at the NE end of the lake. And a chase across that area was just now observed. The chased bird going from the outer platform towards E35. Neither bird of the W pair seems to have a really big shield. Some cowing at the S end just heard. The ♂ setting at 6.5 (1:45 p.m.) remains in place when the ♂ chases an invader out by the nest, but she gives a low poonk-poonk-poonk. The bird on the nest gave a low punk-unk-uh, punk-unk-uh as a marked Mallard drake fed within 2 feet of the nest, but she made no attempt to leave the nest to defend it. I have yet to see any aggression against any of the ducks this year. Two birds just crossed from E14 to feed at M11. As I approached some cat-tails where the ♂ could couldn't see me, the ♀ that could, gave a low "punt-unt" ~~twice~~, until the ♂ took notice

Fulica americana

Apr 8 Lake Temescal, 420 ft., Alameda Co., Calif. — of my approach. Then she stopped. Just now the E ♂ chased a ♂ Mallard out from P16 and gave him a good flogging. So interspecific attitude is starting. The Mallard turned right back into the area he was just chased from, and the coot did not attack a second time. Finally saw ♀ out feeding at J3 — he ran for the cat-tails when he saw me! The ♀ stayed on the nest when ♂ returned to replace the weighed eggs at J6.5 until ♂ started to reach in, then she jumped off, churred, growled, and moved to the open water where she was immediately joined by her mate. After about a minute her mate left, leaving her to defend alone. Remarked all eight eggs. This nest is much built up from its earlier condition, with a very deep cup. The nest at J6.7 is in good shape too. The S W pair has a platform underway at H7.25, in a trail I made previously looking for a nest. Nest J6.5 was disturbed about 2:50 p.m. Finally at 3 p.m. she started onto the nest, climbing up the ramp, preening, adjusting cat-tails, in all taking about 1½ minutes before settling on the nest. After she was on the nest she gave a couple of low "punks"

Fulica americana

Apr 8 Lake Temescal 420 ft., Alameda Co., Calif.—
and was answered with a couple of pukks by her mate at L5. The nest at P16.2 is well built up, has a nice cup but ~~takes~~ lacks a ramp. It is about ready for eggs, unless the nest seen today for the first time at Q22.13 gets them. The structure at Q23.11 is in complete disrepair. The presence of dead and green cat-tails in a little cove at K9.3 on the island looks to be more than coincidence, since the M pair are going to have difficulty establishing a nest elsewhere in their newly carved area. O does not seem to be a sociable bird, in fact the only times I've seen it were when it was feeding in the Picnic Area.

Lake Merritt, e. l. Oakland, Alameda Co., Calif.—
The population seems considerably thinned out as far as most ducks are concerned, but there still seems to be a fair Coot population. Nearly all the birds present have swollen shields and also a very high percentage of yellow legs. One pinned bird seen but I couldn't get a fix on it. Many of these birds seem to have yellow on the shield in addition to the brown. The pinned bird had a horizontal pin with 2 wires dangling.

. GULLION
'950

Fulica americana

286

Apr 8 Lake Merritt, e.l., Oakland, Alameda Co., Calif. - I would estimate not over 300 ~~birds~~ Coots on the lake today.
Aquatic Park, Berkeley, Alameda Co. Calif. 4 birds at S end, 6 in the refuge area. - a total of 10 birds on the lake

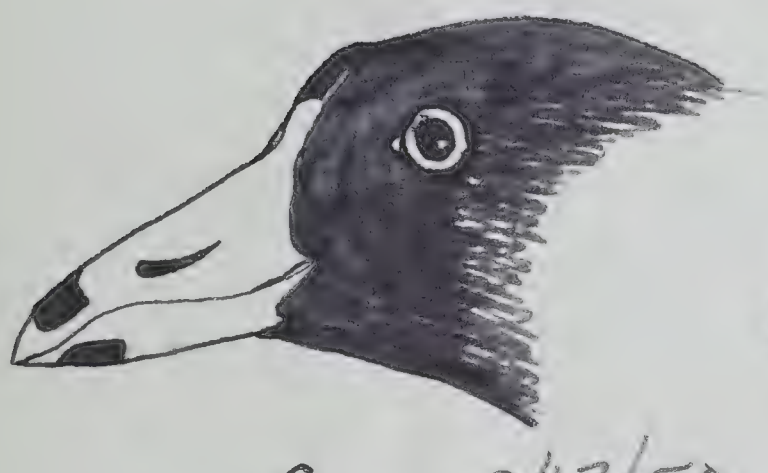
- returning to Lake Merritt a moment - Lots of fighting and chasing was observed today. The majority of the birds seemed to be in an aggressive mood.

Apr 9 Lake Temescal, 420 ft., Alameda Co., Calif. - About 8 a.m. ♀ was on the nest, as I came in, she got off and churned. Took 2 or 3 pictures of her and 1 of her mate, all in partial display. There was quite a bit of chasing going on in the cat-tails in the SW area. - Feeding birds at P30, got photographs of several birds, ♂♂ and of a charge. When the ♀ came up one of the males ♂♂ kept challenging her, chasing etc, but she just kept out of his way, occasionally cackling, and charging him every time his back was turned. Finally the ♂ came up to P28 to support his mate and the other ♂ left. Shortly afterward ♀ returned to the cat-tails at P23 where she preened for a couple of minutes. While she was standing there ♂ came over swimming around.

W. GULLION
1950

Fulica Americana

4/3/50



#652

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#652

0 4/6/50

pages 288-289

see photographs

W. GULLION
1950

Apr. 9

Lake Temescal 420 ft. Alameda Co. Calif. —
the point; she immediately responded by going in a deep arch, spreading under tail-coverts, ~~spa~~ slapping the cat-tails with one foot and giving a rapide, excited "punt, punt, punt." The male did not respond, but swam right on by. Now 9 a.m. about 15 minutes later the male is on the platform preening and giving an occasional "puhk". I can see his mate. Now 9:04, his mate is coming down along the shore, giving low "punts", his "puhks" are becoming more excited but he's still preening, hasn't stopped preening at all. She is feeding along the cat-tails about 5 feet N of him 9:06, he is still puhking and preening; she is feeding nervously just N. Now 9:07 he has ceased preening, is puhking more frenetically and is moving cat-tails around building up the platform. Now she is swimming by to the W. he left, they went over by the 422 nest, then he started chasing her very closely as if trying to mount, she diving when he was almost on her, several times, once he dived behind her, all the while he was giving the "puhk-uh, puhk-uh" note and she the "poork" note. Finally she swam off to the S, he returned to the vicinity of 423. Photographed — in BW and color — the display platform at 423.13 and the nest clump at 422.

Fulica americana

Apr 9 Lake Temescal, 420 ft., Alameda Co., Calif. — The nest at P16.2 is built up with dead ~~materials~~ cat-tails laid upon the green stuff used for a base. The dead material had to be brought in since there is very little there, the area having been burned. No eggs in this nest. Although this nest was very exposed when started, the growth of green leaves has pretty well concealed it. The nest at Q22.13 is so well concealed that I am not going to be able to check it, especially since it can't be waded to. — A chase, one of the E birds, the ♂?, attached two birds at K17 and drove them to I17, where paired display ensued. 2 to 1. Then the E bird retired and the other pair moved down into their W territory. I threw out some bread at M10 and they came across the lake after it. There was some bantering with SE ♂ at the line between M9+10, but the W birds held their own. Once the W ♂ attached W/Bl at M12 and chased it to K13. Apparently the W pair and the M pair are the same. See next page for apparent territories today. Now W ♂ is chasing a UNM out the same place he just chased W/Bl. This UNM apparently was E♀. Wrong, it was not, E ♂ just chased

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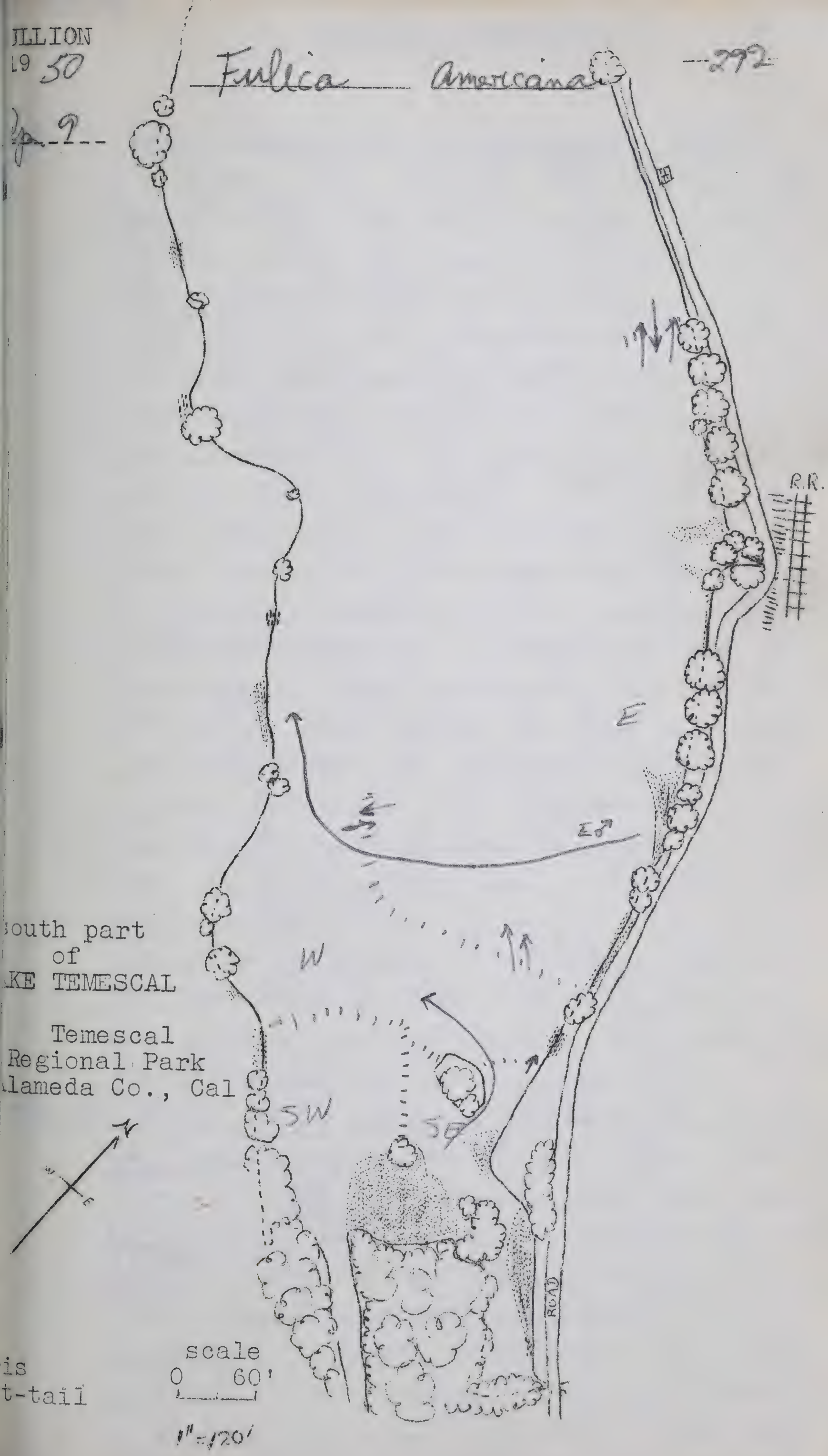
Fulica americana

-292-

Pp. 9



south part
of
KE TEMESCAL

Temescal
Regional Park
lameda Co., Cal

is
t-tail

Fulica americana

Apr 9 Lake Temescal, 420 ft., Alameda Co., Calif. — it from P15 to I15 to G19. As they penetrated the W territory, both W birds, tho at L and J11 gave calls. A moment later SE♂ came out, chasing W♂ to I11, displaying and then returning closely followed by both W birds. W♂ immediately returned to M10. W♂ just penetrated to L8, was driven back out to L11 by SE♂. No notes, as usual, but SE♂ displayed W♂ did not. SE♀ has been off the nest for a few minutes 10:04 am., and just now climbed back on. SW♂ started to charge a bird concealed in the brush at F9, but when the bird came out in the open, he stopped and turned back towards I8. Apparently it was his mate but he had failed to recognize her half hidden form. SE♂ just chased the W pair from L8 to L11, and displayed. W♂ then chased SE♂ back to the L9-10 line, and a short paired display ensued, the W♀ cacked her encouragement.

Apr 10 Univ. Calif. Campus Alameda Co., Calif. — ~~W~~B displaying on the platform by the wall, V/G was only bird to respond. ~~W~~B on to platform by water edge with ~~G~~BY close behind. She displayed, tail coverts spread, deep arch, and slapping foot. He moved in close, might have mounted except that somewhat walked thru the court-yard at that instance — discouraged

Fulica americana

Apr 10 University of Calif. Campus, Alameda Co., Calif. — both of them. G Bl went back to nearly defunct nest, slapped both feet, alternately, for a moment, then settled down.

— Jewel Lake, 570 ft. ~~Alameda Co.~~ Contra Costa Co., Calif. — Arrived about 1:45 p.m. One S bird was feeding at D11. About 5 min later another came out from C13 to feed. A short time later, N♀, by call, crossed from C24 towards the island, soon after she was on her way, N♂ came charging out to meet her. She also took the charge pose and they both held it until they passed. Then N♂ turned, south to G20, still charging, but stopped there and went in by the boat. A short time later, both S birds did the same.

note:- Apparently when one coot sees another in its territory, it charges it until it has definite proof that it is a friendly bird. They seem incapable of recognition at any distance, and then must have the bird facing them in order to recognize it. Occasionally a bird will break off a charge before reaching a recognized bird, but after the two will pass one another, drawing up immediately after doing so.

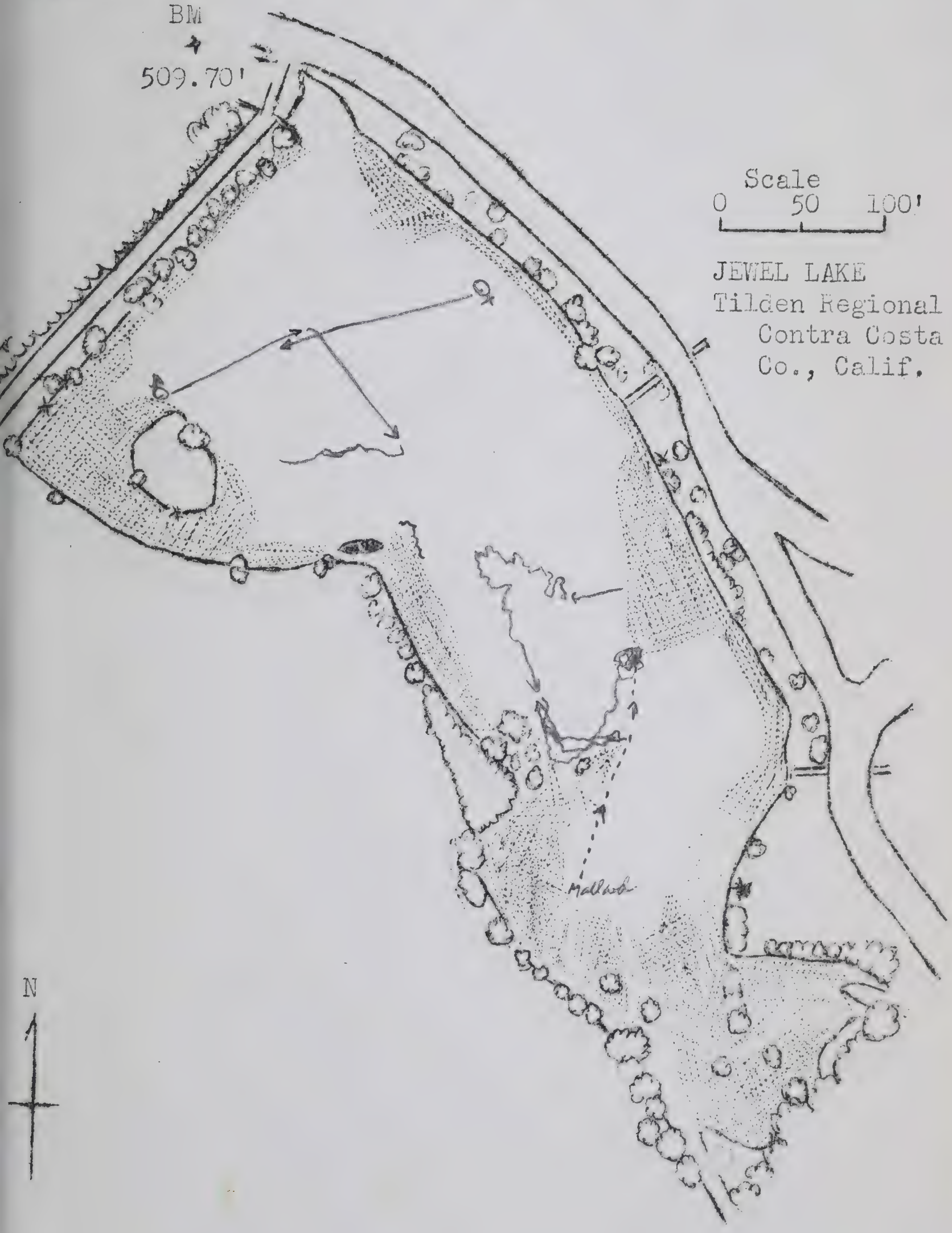
A pair of Mallards came out from H4, swam along the W edge to

GULLION
1950

Fulica americana 295

Age 10

1:45-1:55 p.m.



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GULLION
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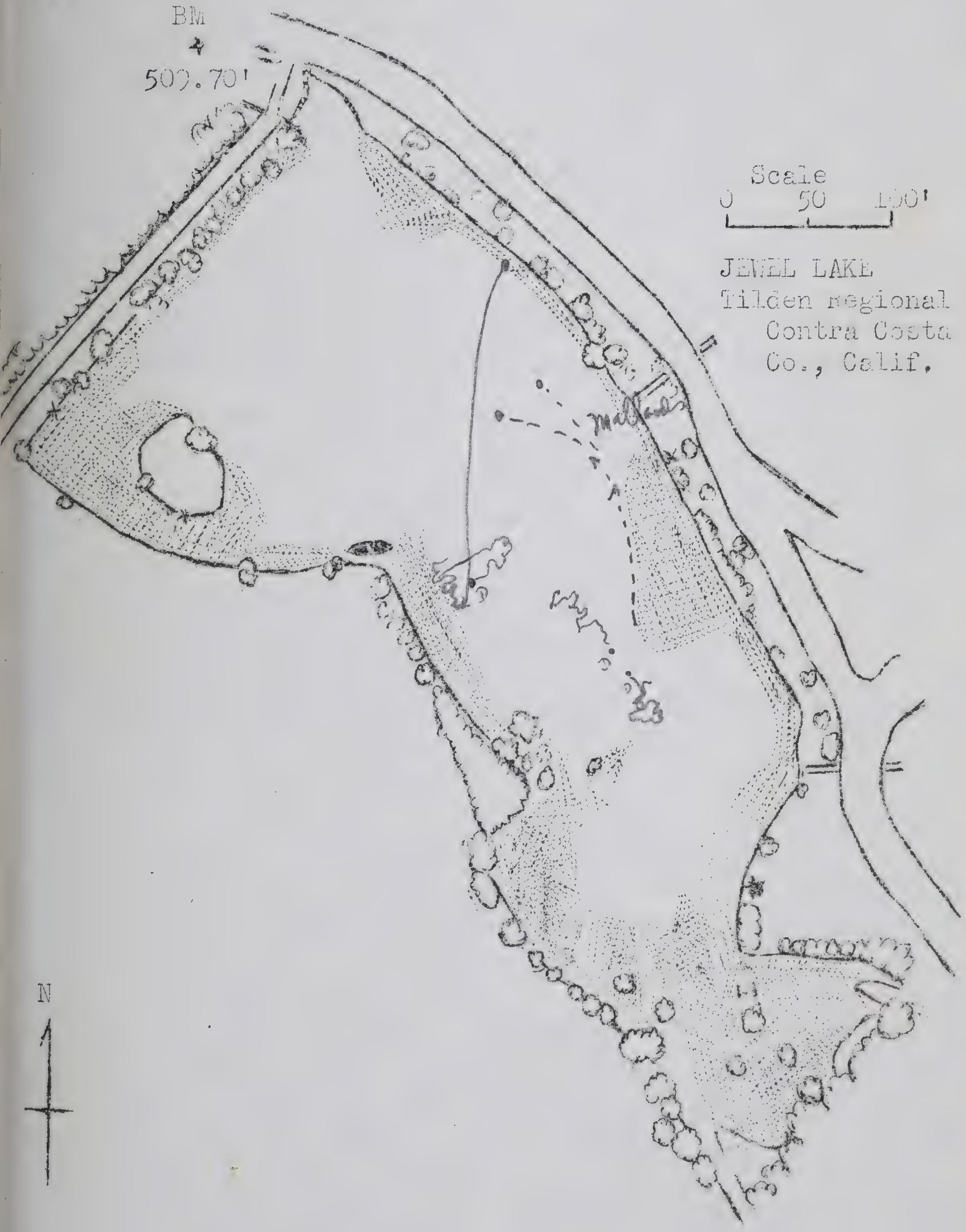
Fulica Americana -296-

Aug 10 1:55-3:30 p.m.



I. GULLION
1950

Apr 10 Jewel Lake, 510 ft., Contra Costa Co., Calif.-
F9 - crossed to D11 on to C+E 18. From there over to the west side, either to boat or island - then they encountered N♂ who chased them to G26. When they crossed F9 to D11 they passed by a few feed from the S pair, but all they were greeted with was a few "punks". One diving bird time 7+9 seconds. About 3:15 p.m. I chased one bird N. ♀ ? out from C24. she crossed the lake to G16 where she disappeared into the cat-tails. N♂ not seen, but both 5 birds accounted for during time this bird was under observation.

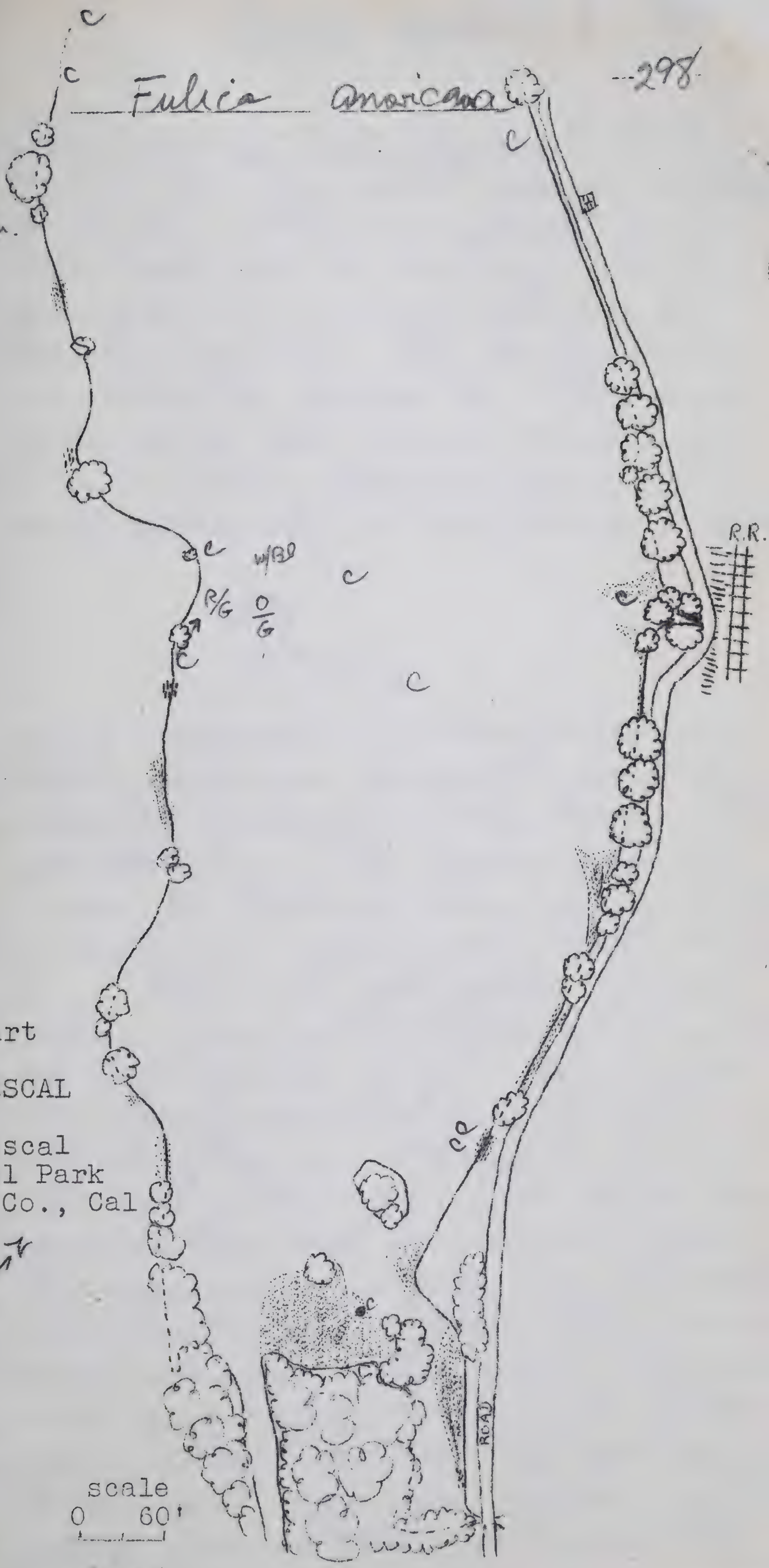
Apr 12 Lake Temescal, 420 ft., Alameda Co., Calif.-
When I arrived at 12:30 p.m. ~~the~~ a SE bird (the ♂ ?) was carrying a small piece of cat-tail from I 7 to the nest at J6.5. The ♀ incubating bird met it on the ramp and took the piece. The first bird returning to the water & swimming away. No notes were heard. Just heard lot of chasing in the cat-tails at the S end but couldn't determine what birds were involved. Things seem to be generally quiet, at least this time of day. A chase at F22 G/R being chased by another bird. As I came to H 9, the W pair came over from about H 13 to

ULLION
1950

Ap 12
12:30 pm.

Fulica americana

-298-



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

scale
0 60'

1" = 120'

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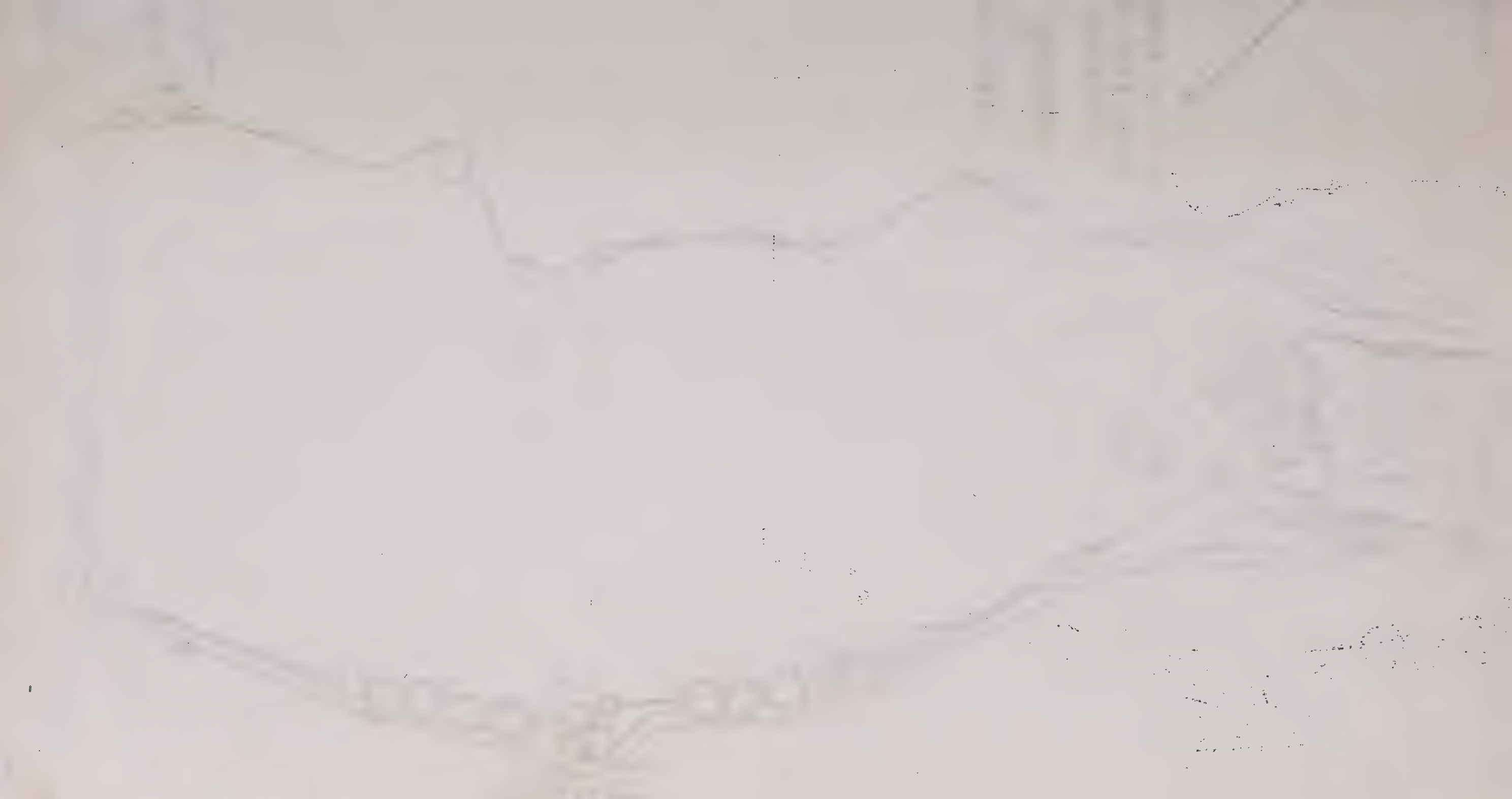
at-tail



Fulica Americana -299

Apr 12 Lake Temescal, 420 ft., Alameda Co., Calif. -
M10 where they pooled around, waiting to be fed. After a couple of minutes the ♂ started chasing the ♀, giving a low cough like note barely audible. She dived and he immediately behind her. They swam under water from about M11.20 to 12:11. When they surfaced, the male swam off in a "brace," while

the ♀ remained in place preening. This behavior suggests post-copulatory behavior. Thus under water copulation. The ♀ proceeded to cross to the willows on the W side at E12-14 - followed shortly by the ♂. - The E ♂ got rather excited when a pair of Mallards got close to the cat-tails at 22. He charged the ducks but did not actually attack them or attempt to drive them out of the area. The ducks were apparently nest hunting and gave the appearance of planning to enter the nest area. When they moved back up into the Inlet they were not molested but were watched, and when they started out again the ♂ coot charged again, until they passed the nest and then

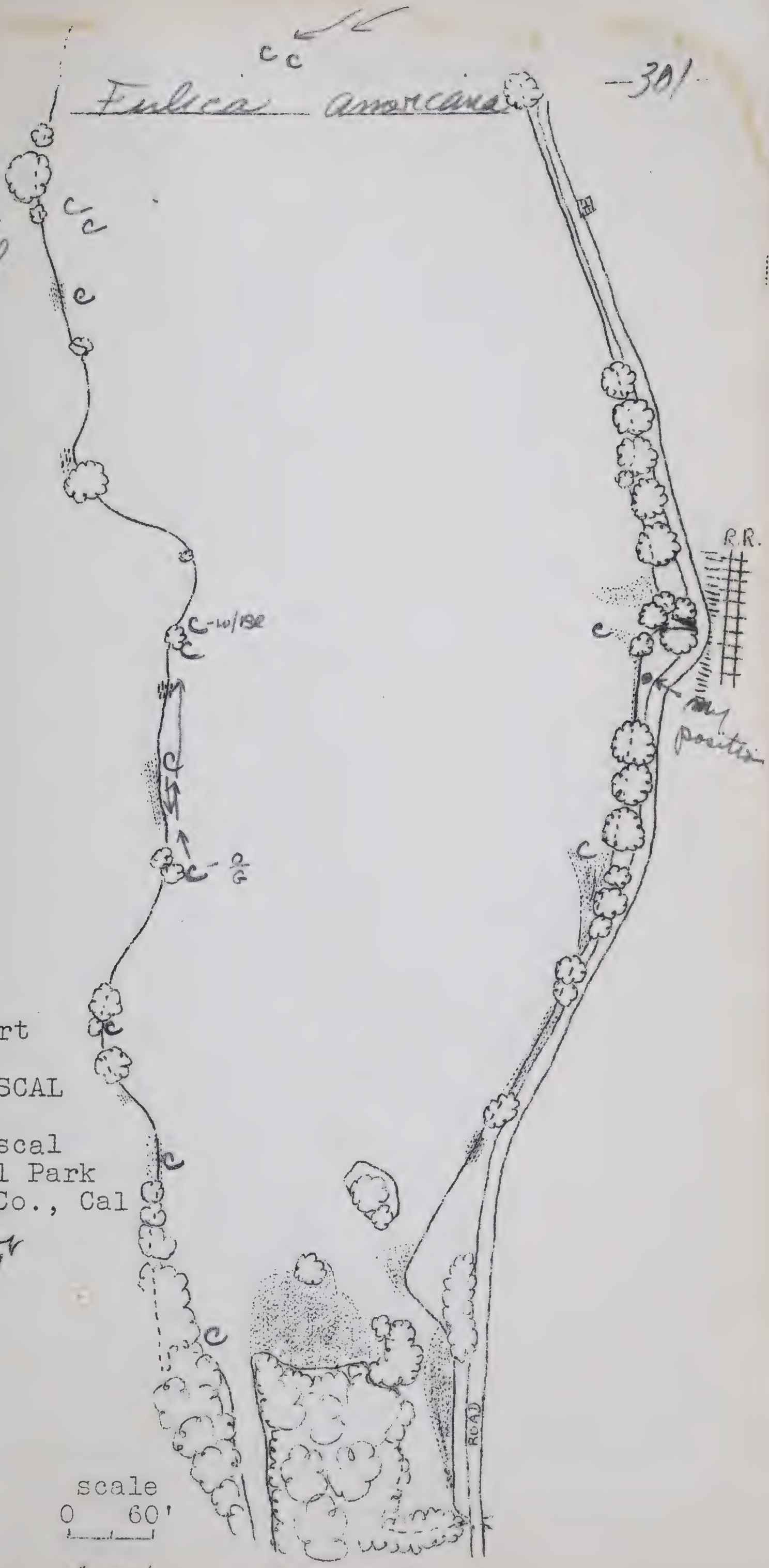
Apr. 12 Lake Temescal, ×20 ft., Alameda Co., Calif.—
he ceased the chase. He went at
Q 23.11 and the copulatory platform
at Q 23.13 seems to be defunct. Now
a ♂, (SE ♂?) just chased a ♀ bird,
by alternate charges and splatters, from
near the island to I 22. No, I guess
it was the W ♂ doing the chasing
since he returned to E/C and was
greeted by his mate there, she giving
one "pook". A bird at F 22 gave
a momentary display as the W ♂
turned off from the charge, and another
bird is preening at G 19. Now a
short charge at F 22 — w/Bl and ♀
being charged — another unmarked bird
was either assisting or also charged,
could not be sure. It was short lived.
A bird crowing at F 10 went
unanswered. Now a pair of Mallards
~~at~~ in the E inlet are being ~~chased~~
noticed but not attacked, the about
2 feet from an E bird, another
of Mallards did attack however.
♀ + UNM feeding at F 18 were
charged by a bird with large
shield moving down from F 20.
w/Bl seems to be staying close to F 22
and ♀ at F 18. The bird that apparently
has been feeding with ♀ so much of
the time ~~is~~ is w/Bl? the paired
bird. Shield on w/Bl is swollen,
on ♀, 55. Just now, 2:45 p.m.
an E bird chased both birds of

GULLION
1950

Fulica americana

-301-

Apr 12
1:20 pm.
cation of
birds.



south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

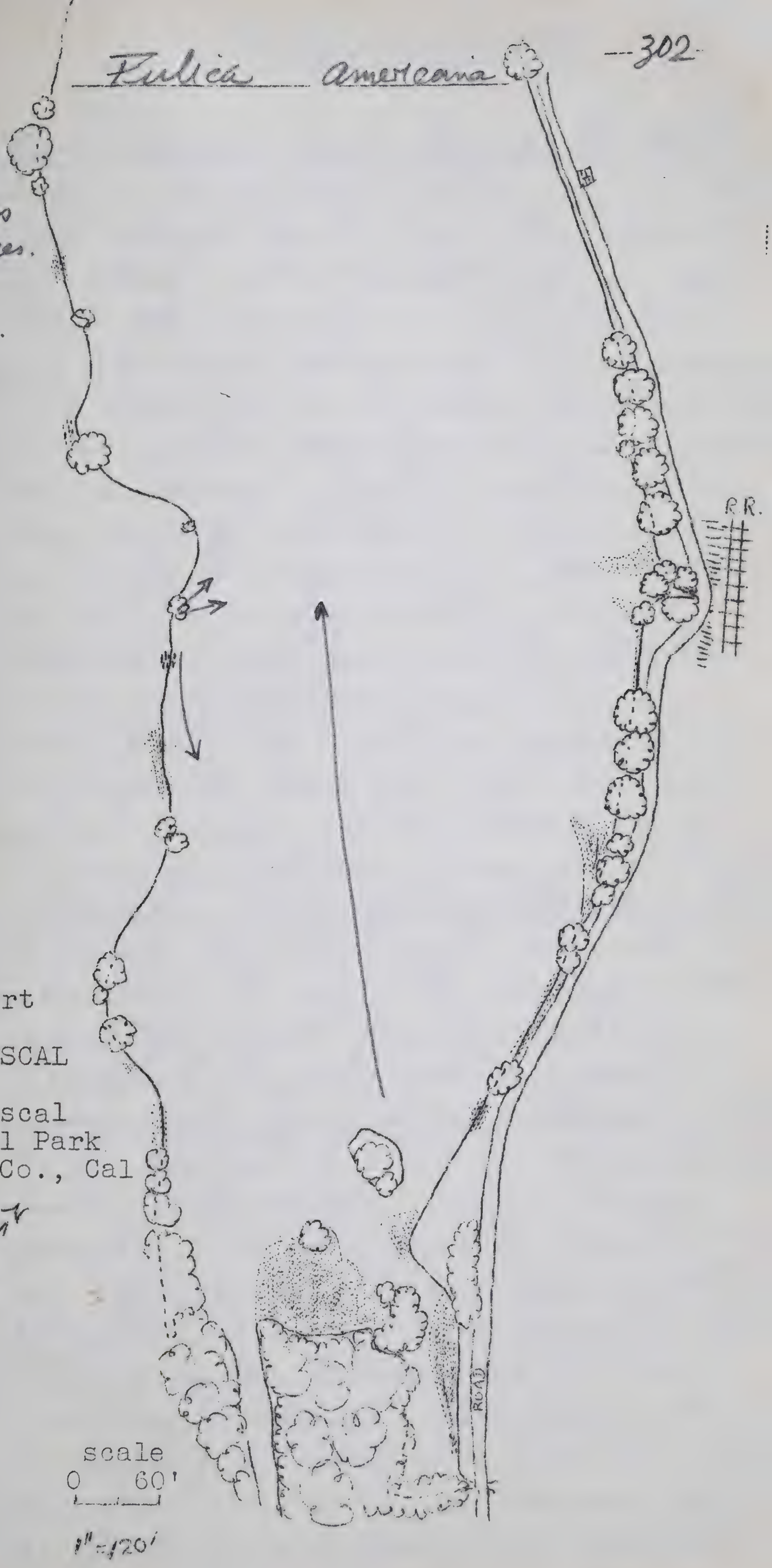
ULLION
1950

Fulica americana

-302-

ar 12

Displays
and chases.
12:30-
p.m.



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

is
t-tail

V. GULLION
750

Fulica americana

Apr 12 Lake Temescal, 420 ft., Alameda Co., Calif. — a pair of Mallards out from ♀ 27. The Coot chased the ♂ first, then returned to get the ♀. 18 of the 8 eggs in nest J6.5 now gone, #1, 5, 4, 6, 3, 8, 7, are the ones remaining #2 is missing. The nest has a lining of dead willow leaves, also some dead and green grass on the ramp. Both birds are close by, in the cat-tails, churring, but only the ♀ is growling. The structure at +17.25 is apparently a display or copulatory platform, another structure, more concealed and nest like, is started at I.6.1. It is composed entirely of dead cat-tail material, short pieces, on the base of a large pushed over clump of cat-tails.

— Aquatic Park, Berkeley, Alameda Co., Calif. — 3 coots left at S end. All with SS shields. 4 in the refuge area, shields not fully swollen, couldn't be sure but probably SS.

Apr 14 — Lake Temescal, 420 ft., Alameda Co., Calif. The nest at ♀ 22.73 is well built up, both birds nearby, both in charge position as they quietly swim around in the vicinity. The display platform at ♀ 23.13 seems to be completely defunct. Photographed BW and color taken looking N along E territory. When I looked at nest J6.5 at first today no bird was on it, a moment later a feeding bird came over and deliberately

Apr 14 Lake Temescal, 420 ft., Alameda Co. Calif. — and slowly climbed up on it. Carefully adjusted the eggs and settled down. The nest at I 6.1 is considerably larger, a second layer of coarser larger stems and a couple of green parts worked in. What may be the beginning of a ramp running off to the SW of the nest, composed a two fairly large stems. Cat tails are now about 6 feet above the water surface. When I first waded in to J 6.5 I flushed a bird off that I thought was the ♂, then about 5 minutes later, returning to the nest, I flushed a bird off I knew was the male. After a couple of chuons the ♀ came from down S to join him but did not chuon or growl. Once she gave a couple of "grunts". Tried to photograph the ♂ churning in BW. 7 eggs in the J 6.5 nest.

— Jewel Lake 5/0 ft., Contra Costa Co., Calif. — On arrival, about 5 p.m. both S birds were feeding at D 12. I worked the cat-tail at B & C 11, 12 & 13. Then cut over and worked F 9, then G H I 8 to 18, K to M 19, and all the cat-tails around the island. Saw ♀ feeding alone, giving an occasional "pook" at F 27 + 28. Found a nest with 7 eggs at M 25.19. Very well concealed, right in the midst of an extremely thick stand of dead

V. GULLION
1950

Fulica americana

Apr. 14 Jewel Lake 510 ft. Contra Costa Co., Calif. — cat-tails. It is a very small, compact nest, somewhat elevated above the water. The ♂ had been on it, left as I approached at P26. When I got close to the nest, he churred, "purred" and gave a note comended like the ♀ would but not the same. The female showed some interest in the nest but never seemed to be as fully concerned as the ♂. The ♂ left the nest at about 5:45 p.m., it is now 6:15 and he is still off. He has approached it at least 6 times, with neck craning, but not going in. Twice he pursued the female pecking at her until she dived, once he charged from M26 to 6/8 but did nothing except ~~coo~~ rouse a couple of "purrs" from the ♀ at C5. At 6:18 he was out of sight for over a minute in the edge, but came out, now 6:20 he is wading back. Once the ♀ climbed onto some floating cat-tail at M27.5 - he went over, purred a few times and mounted her. I doubt if they copulated. He fell off and she pecked at him a couple of times. Then stood up and fanned her wings. After that he went over to the nest area at 6:18. At 6:25, he is over there again, still craning but not on. I hope they are not going to desert this nest.

I. GULLION
950

Apr 17 Lake Temescal, 420 ft., Alameda Co., Calif.—
On arrival, at 1:41 p.m., a bird was sitting tight on nest J6.5. E pair in copulation at 1:55 p.m. at G23.9. One bird was making a low, clear "put-put-put," or similar note as the ♂ was mounting. One bird jumping for leaves of weeping willow at G24. That bird moved to D26 to feed the same way there. In the heat of the day, as it is now at 2:05 p.m. most of the coots are in shaded areas. Mostly feeding some, but a few just sitting and preening. At 2:10 a pursuit, tho not active, as two birds moving from E13 to F17 caused a bird at F16 to move to F20. The trailing ♀ poonked at least three times but the leading ♂ bird remained silent. G/R and an unmarked bird seem to be occupying the M area today. The UNM bird gives the ♀ "poonk", G/R gives the ♂ call. I haven't seen them actually billing, but they seem to be amiable enough and once UNM "poonked" in G/R's direction, G/R reciprocated with a "puhk" or two. They spend their resting time at the cat-tail thicket at O13, but range to the island. Saw G/R billing with the UNM bird at J10.— At 2:30 p.m. a boat from the fisheries class came down the lake, sending one coot

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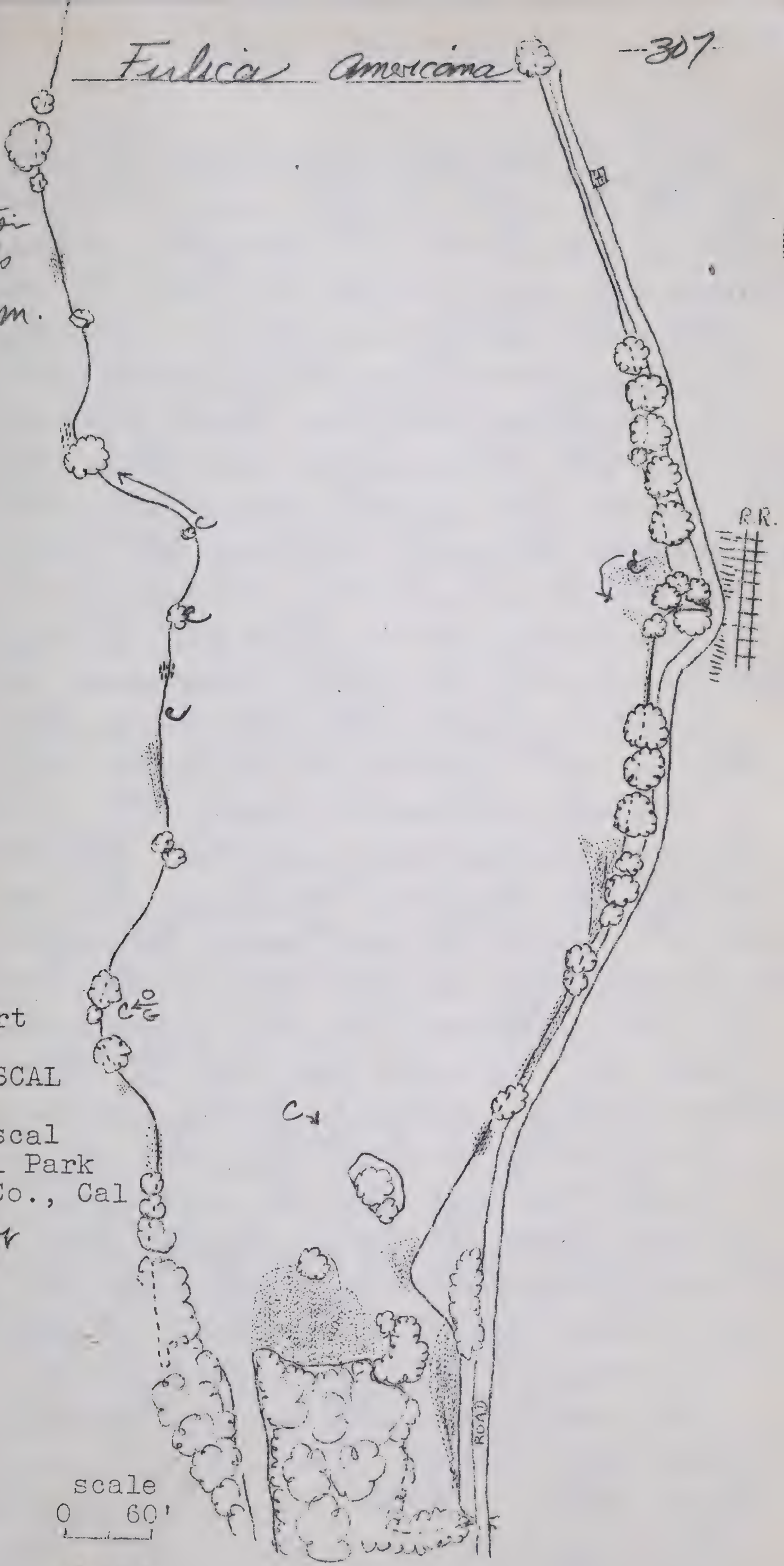
Fulica americana

-307-

Cor. 17

Location of birds 2 p.m.



south part
of
AKE TEMESCAL

Temescal
Regional Park
lameda Co., Cal

N

scale
0 60'

1" = 120'

is
t-tail

Fulica americana

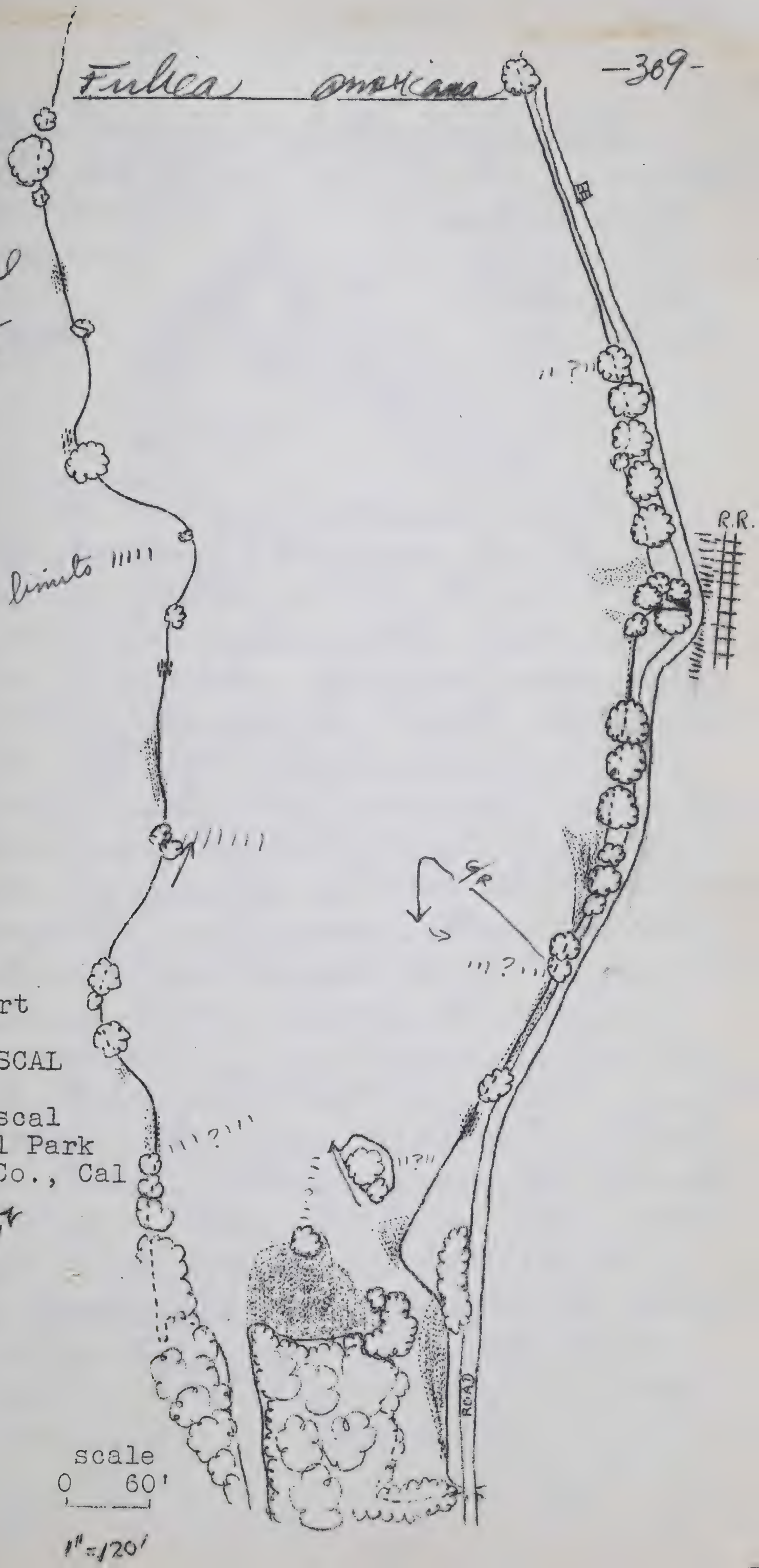
2p 17 Lake Temescal, 420 ft., Alameda Co., Calif. - scooting from the E side to the west side. Apparently ♂ ♀ while sitting on the nest at J 6.5, gives a few ~~peeks~~ "ponks". A moment later the other bird came to the nest carrying a bill full of dried cat-tail material. As the nest was approached the bird on the nest came down the ramp to take the material from the approaching bird and to weave it into the nest while the other bird wandered off. A moment later, it turned out that the bird off the nest is the ♀ the bird on the nest then is the ♂. ♂/R has a swollen frontal shield. Is now wandering around on the island much disturbed by the boat on the lake. ♂/R finally got down and around the boat area, swinging into the willows at P/4 w/Bl, ♂, ♂/R all seen on the lake, and one of the fisheries fellows reported ♂ in the cat-tails at the S end. Closing in to the nest at J 6.5, both birds are off the nest, but in the cat-tails about two feet from the nest. The ♂ is busily churning, the ♀ growling, the ♀ came in closest. And the male gave a growl like note, similar but quite different from the ♀. The nest at I 6.1 now has a cup, the ramp is developing to the SE.

GULLION
1950

Fulica americana

Rec 17

Territorial
Behavior
Evident
Today



Probable limits

south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

N
W
E

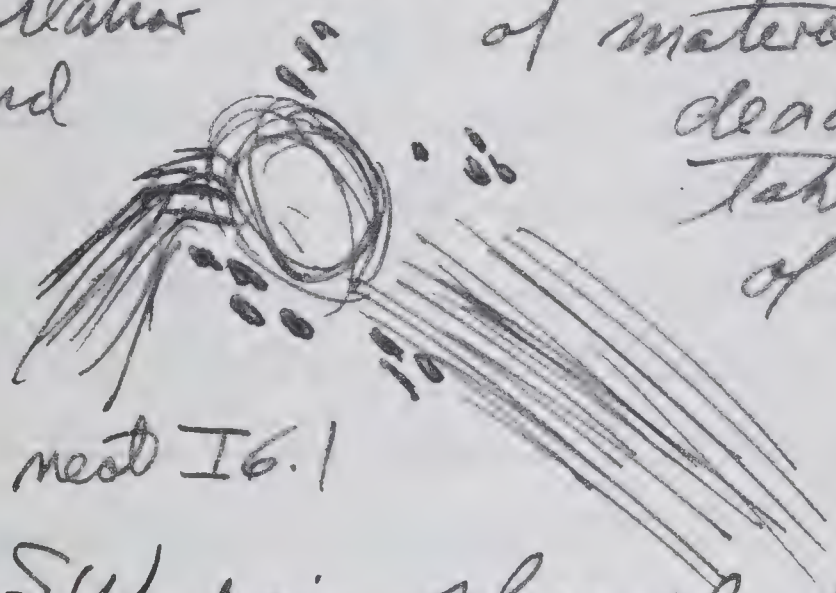
ris
at-tail

scale
0 60'

1" = 120'

Fulica americana

Apr 17 ~~Lake Temescal, 420 ft, Alameda Co., Calif.~~ -
The platform at H7.25 has a considerable accumulation of material both green and dead but is not taking the shape of a nest.



nest I6.1

This SW pair showed interest in defending this area for the first time today. The ♂ went out into the open water but looked as if he was seriously considering churning, while the ♀ remained in the cat-tails, close by, until the last minute, poonking. Walking along the W side I scared out birds, perhaps all non-territorial. W/Bl and G were among them. As they drifted out towards K17, G/R came out from O14, moving to L16, and maintaining an aggressive position deflected the flock back towards I13. After they were deflected, without actually attacking any, he crowed twice. Now 3:45 p.m. G/R is back at O14 with an UNM bird.
Potamogeton is beginning to show up as an important part of the diet. That is, many birds are diving for it frequently.

. GULLION
PSO

Apr. 17 Jewel Lake, 510 ft., Contra Costa Co., Calif.-
One bird from the S pair logging in area D-E/10 & 11, along. It is the only Coot visible on the lake. at 4:45 p.m. It is the ♀, now a gang of people moving along the road at the E side have caused the ♂ to move out of the cat-tails at D12 and to cross to F9. Now I can see, but not see the N♀. When the same mob of people came across the dam they chased the ~~Geese~~ out of the NW cove and it moved down without any disturbance from the coots. A moment ago a bird was visible at G18 but it is now out of sight. Checked the nest at M25.19. Eggs warm and all present. No defense until about 2 minutes later when the ♂ came out of the cat-tails at M27 and moved around to K25 to "purrk" and churr (5:10 p.m.). The ♀ later came up from H18 to join but not to take any part in the display. Could clearly see the band on the leg of the ♂, so I know he is a last year bird.

Apr. 19 Univ. Calif. Campus, Alameda Co., Calif.
Bird 60086 dissected further. Spleen looks normal & slightly granular, ovary normal, caved in large follicles, oviduct dilated and flabby. Removed cloacal.

see p. 340

V. GULLION
950

Fulica Americana -312-

Ap 19 Univ. Calif. Campus, Alameda Co., Calif. - section but was unable to find any bursa, tho what was probably the pocket was found. Probably the bursa has sealed by time a bird is 11 years old. This bird was fine in good physical shape. Coelom is really loaded with fat.
Tags on LG/Br replaced by completely new style W-R. No change in shield. Weight 431 grams. To be released in the pool. Y/LB photo - B.W. p348
1 tags on
Y/LB replaced by new model G-Y/B.
Weight 444 grams, into pool.
P/LG - with silver pin, had to be repinned since pin had worked very loose and was nearly ready to drop out. Incidently, the pin on LG/Br was well sealed into the skin, and a mass of scar tissue came along when the pin was removed
V/Bl - photographed, shield class 11S.
weight 518 grams, docile ~~as~~ relatively so. Old tag style replaced by new
G - V/Bl - same pin ~~was~~ used again.
Legs yellow-green, brown on thigh.
P/O, photographed B&W, p.347 shield 3S.
silver pin pretty well thrown out of body, will repin it, deeper.
Weight 452 grams. Legs yellow-green. O/Bl - photographed in B&W. p346
Shield further receded, to 4S or maybe S. Bill painted with nail polish. ~~Weight~~ Legs green.

Fulica americana -313-

Ap 19 Univ. Calif. Campus, Alameda Co., Calif.-
G/C photographed B&W. Shield U.S.
Weight 540 grams. Old tags replaced
with W-O/B. B/O - legs yellow-green
bursa about 20 mm.
- Lake Temescal, 420 ft., Alameda Co. Calif.-
Bird T/R in area M11 with UNM at
4:45 p.m. A bird on the nest at J6.5
at 4:50 p.m., a little concerned about
a ♀ Red-wing fooling around nearby.
Released red billed B/O at R22
at 5:05 p.m. This the ♂ was on
the nest at Q22.13, he did not leave
the nest, merely "punked" several
times. Shortly after the ♂ "punked"
and the ♀, at Q25 responded with
a couple of "ponks" and came
swimming down to drive B/O
out to about L23 at 5:10 p.m. W/Bl
at H23 came out to meet B/O and
curiously followed her to F26 then
back down towards G22 and
finally out to L26. While at L26
the ♂ ♀ perched twice, then the
two B/O & W/Bl, moved S, W/Bl
attacked B/O once, but mostly has
been swimming close by with its
neck up and tail partly spread.
Finally at I 22 a UNM came out
to join the two, also curious.
B/O then moved on down to H13,
where ♀ came out to meet her, and
where they billed for a moment.
Then a dog came swimming in the

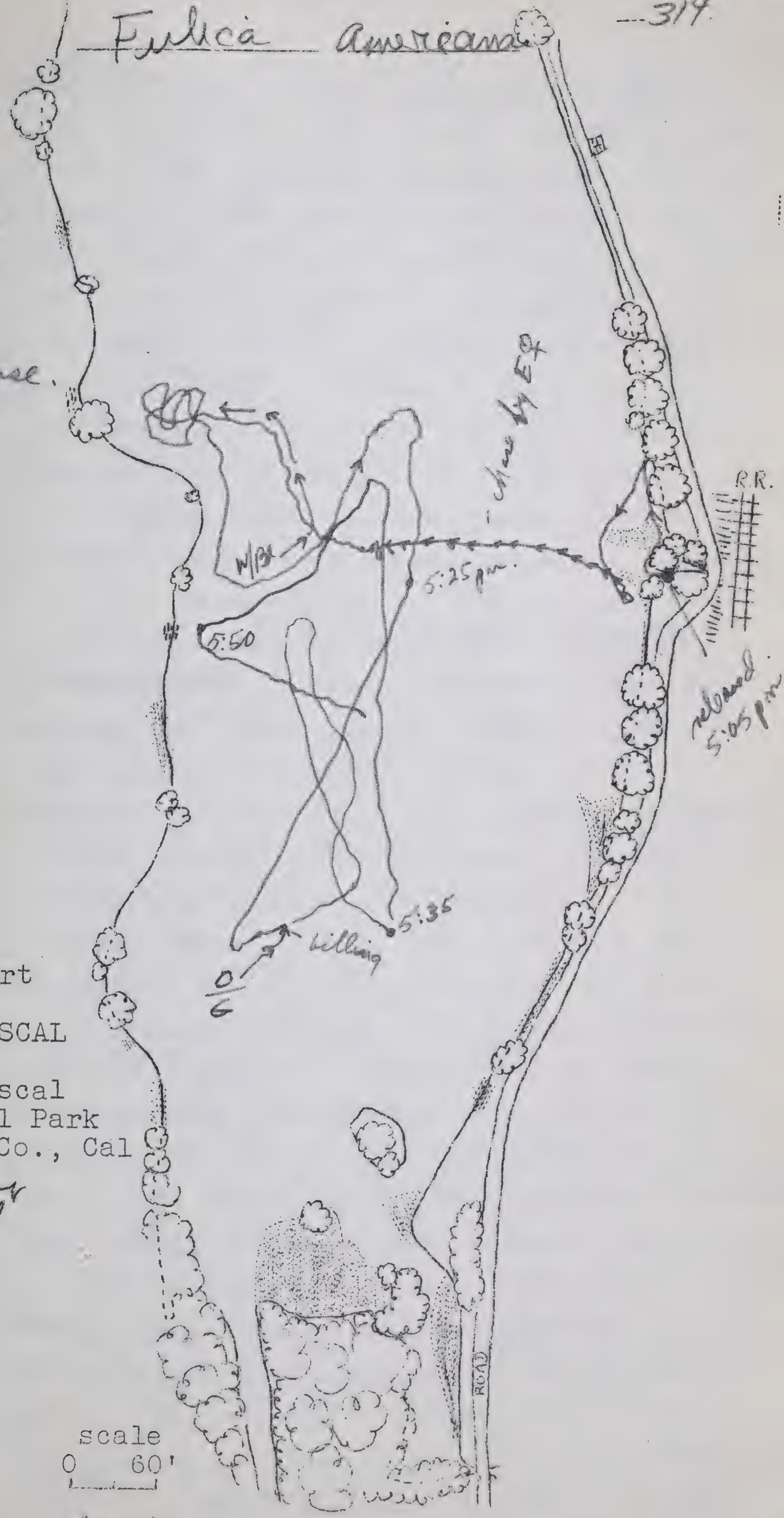
GULLION
19 50

Apr 19

Route of
Bl/O
to release.

Fulica americana

314



south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
at-tail

scale
0 60'

1" = 120'

Apr-19 Lake Temescal, 420 ft; Alameda Co., Calif-
lake and all the flock moved towards
I 22. The Ruddy Ducks seem to be
afraid of the red-billed bird, while
the Coots are all just curious. W/Be
followed her closely for about 15
minutes, till 5:30 p.m. but then
lost interest. Now 5:35 p.m. ♂/G is
following Bl/o near K 13. As Bl/o
moved in to M 13, G/R came
"punking" down, charging, from the
island, and E♀ came moving S from
O 22, "pooking". Bl/o moved out
accompanied by a ~~G~~ ♂. ~~As the~~
~~two birds~~ Some fellows throwing
rocks at the two birds in the M
territory scared them out to
about L 16 & 14. As they stopped,
they both turned and cackled &
crowed at their tormentors. A
chase ~~and~~ from the SW area and
display at I 10, now 5:45 p.m.
a chase to I 36 by a bird from
the N? pair. Now Bl/o is alone,
swimming to shore near F 20. G/R is
feeding at K 8. 6 unmolested by the 5
pair. He went onto land when I walked
up, then around the island coming out
on the W side. For a moment another
bird was more or less pursuing him
in charge position but I think it
was his mate. Now 5:52 p.m.
he gave a couple of loud "punks" at
K 11. - Next at I 6. 1 has 2 eggs.

Fulica Americana

Ap. 19 Lake Temescal 420 ft, Alameda Co, Calif. — In it, both warm. Numbered 1 & 2, no parental concern displayed. Nest is not built up further, or very little, from what it was Monday, April 17. There are several green feathers on the edge of the nest. As I approached (6:20 pm) nest ♀6.5, the ♀ met me with pooping and churning. Later the ♂ joined her and churned. 7 eggs in nest, all warm, non-pipped - they smell a little rotten, shook #1, it seemed to slosh around. Now 3 nests are active, and all three apparently incubating. Don't know how many eggs are in ♀22.13.

Ap 21 Aquatic Park, Berkeley, Alameda Co., Calif. - Coot population seems to have completely left this lake. None at all this morning. A few Scaups around tho.

— Lake Temescal 420 ft., Alameda Co, Calif. - Bird W-O|B (formerly R/C) is to be released here this morning with its crown feathers flattened with Duco cement. Bursa is a little over 5 mm, its right hallux is broken and its feet are generally in poor condition. It has leg bands |O/S - P/O|. Frontal shield is large, bill a little battered. Exposed shank is red-orange. Bird released at 12 m at K 22. ♂ nearly off nest, ♀ on nest, giving low "ponks" to encourage ♂ as he displays near nest.

Fulica americana

Apr 21 Lake Temescal, 420 ft., Alameda Co., Calif. - E ♂ did not respond immediately to the release of W-O/B, but let him go into the cat-tails at S23 first. Shortly after E ♂ went over, routed W-O/B out of cat-tails and drove him out to M21. W-O/B escaped by going most of the distance under water. Apparently the flattened head feathers alone are not sufficient to deter attack, but rather knowledge of the area as well as a general aggressive attitude are probably required. W-O/B moved down the lake (see page 318) into the W area, from which he and a UNM were routed. I/Bl has lost her tags but still has a red bill. That means two ~~un~~ scarred birds are on the lake. W-O/B has worked N along the W side of the lake to about F20 but has now turned back south. No particular antagonism has been shown by other birds towards W-O/B except when he has invaded territorial waters. Now 12:20 p.m. O/G is charging into the W area to E13. Now a paired display between O/G and two UNM at E15 - O/G defending the S area. Just previously O/G, I/Bl & W/Bl were diving and feeding GH 11 & 12. R/G is charging from J11 towards L10. 12:25 p.m. I have

GULLION
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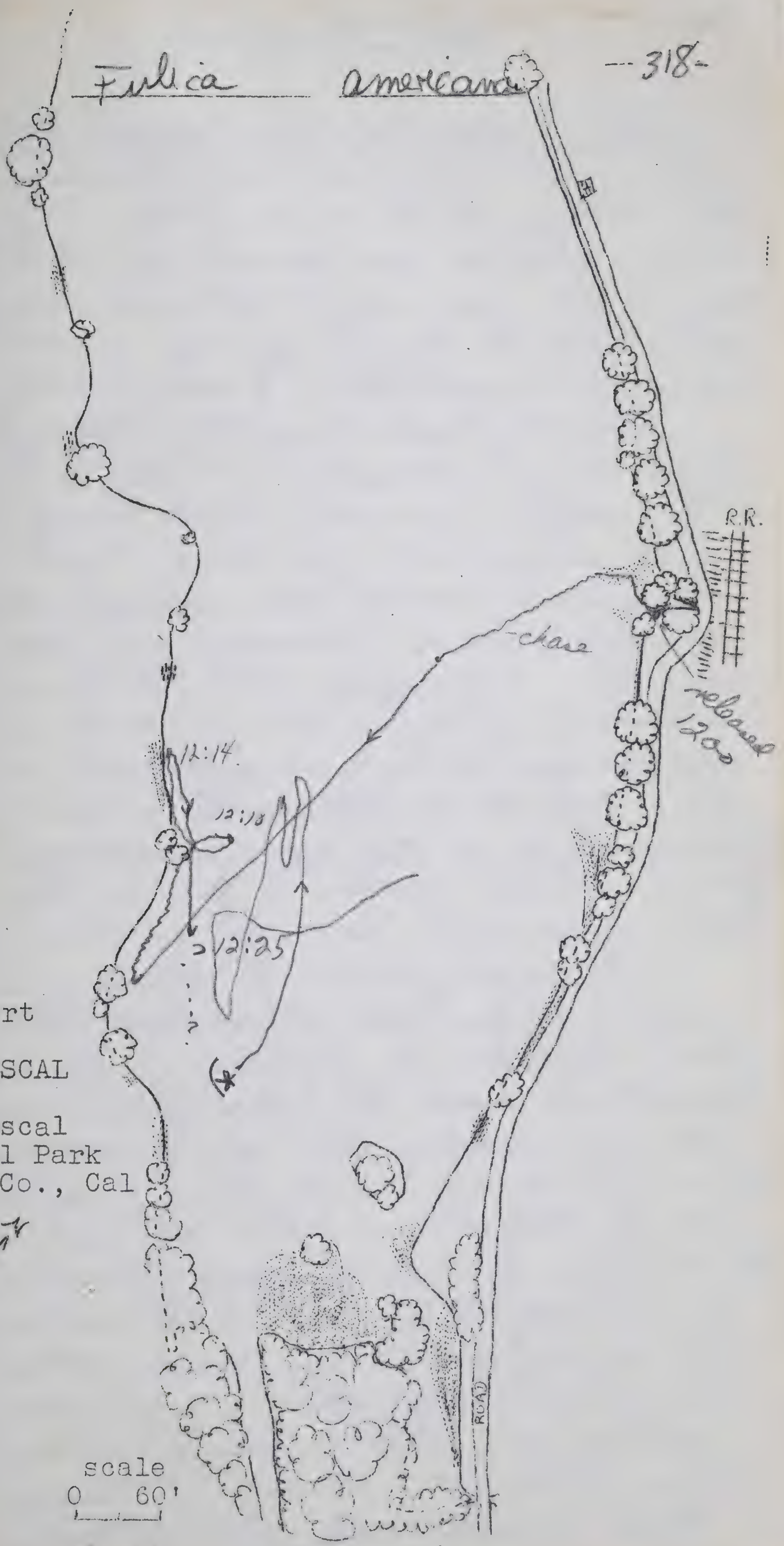
Ops 21

Route of
V-O/B
of to
release.

Fulica americana

-318-



south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

scale
0 60'

1" = 120'

ris
at-tail

V. GULLION
1950

Pp. 21 Lake Temescal, 420 ft., Alameda Co., Calif. — completely lost track of W.O/B. After E♂ chased W.O/B to the middle of the lake, he churned once, silently, before returning to "charge" me. 12:30, just now a general tangle at H12. Main feature was O/G attacking W.O/B from amidst a group of about 10 coots. O/G got in a couple of good licks. Several birds came in close, at least 5 were in momentary pair display, and several birds gave "puh-cowah" notes. Even a bird at P16 responded. Now an E bird is out at M18, "patrolling" a boundary, as a flock is moving N along the middle of the lake. No aggressiveness yet, just being present. It is the ♂ since the ♀ is "poorhing" from on the nest. Now he has left his patrol to move towards O23. The red-billed bird seems to be fully acceptable to the other coots. It is treated the same, or at least seems to be. Can clearly see the tags & color on W.O/B at J17 while I sit at R21, with the light directly against me. O/G with an UNM seems to be in full control of W area now. I wonder why the overturn. The opportunities for identifying W.O/B are not as great as with the other style, but if they last longer, that

ULLION
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Apr 21

Fulica americana

Territories
&
defense seen
today

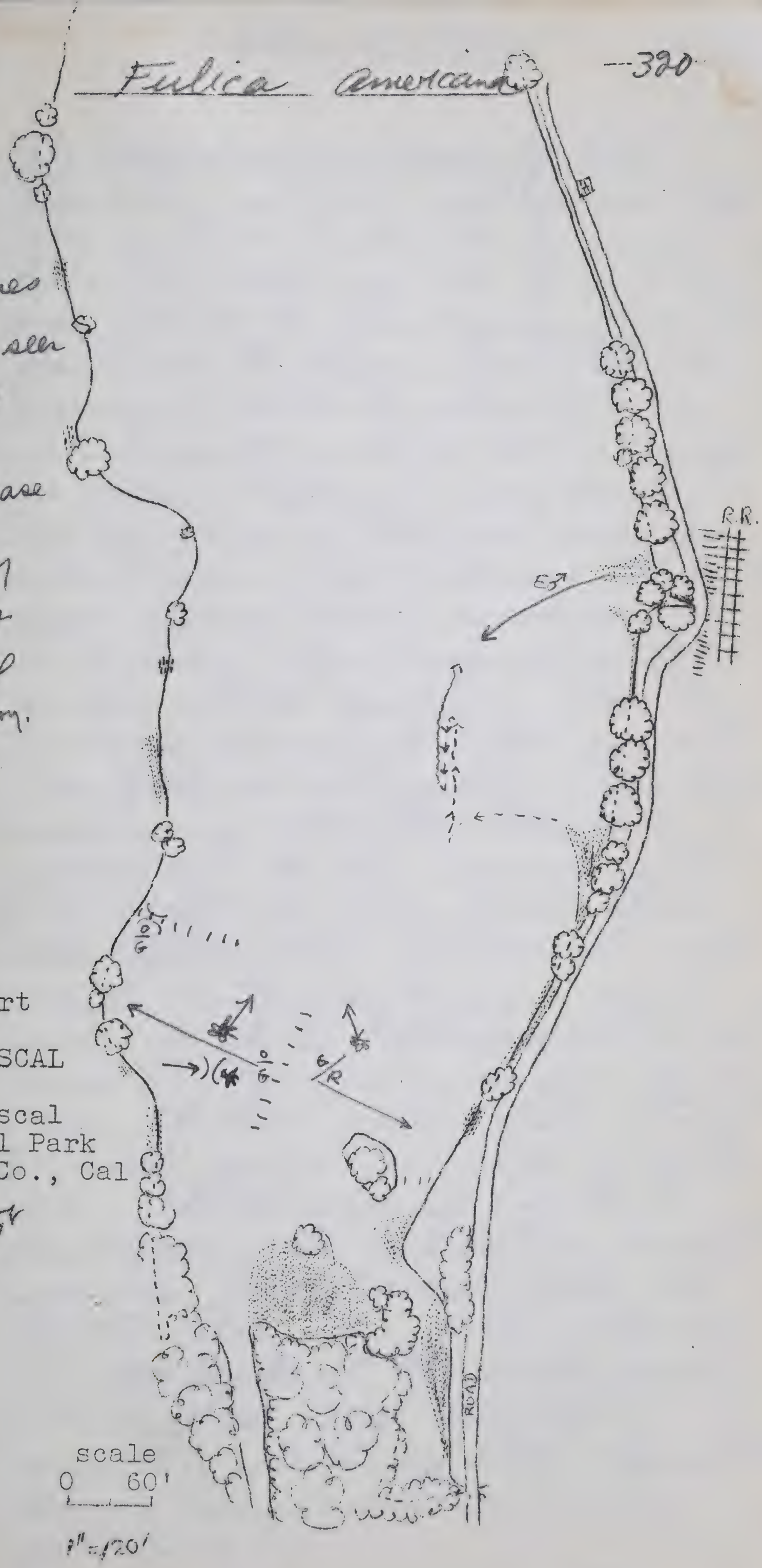
→ chase

(-display

+ -fight

-> patrol

|| Boundary.



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

N

W E

is
t-tail

Apr 21 Lake Temescal, 420 ft., Alameda Co., Calif. - drawback will be more than overruled. Now with W-O/B at F16 I can not definitely make out the B on the tag, only the W & O. The orange tends to flood out the blue color. The sun however is directly above the bird. The ♀ on the nest at Q22.13 gives an occasional "poonk" from the nest. She has been off the nest once for about one minute during the last hour. Several birds swimming at G16 have their heads elevated, in an alerted condition. Now the 3rd bird moved out of that area and two birds are billing there. Now W-O/B moving in, the other two birds move off. W-O/B moving up to W/Bl & UNM at J16, both birds ~~ah~~ lifted their tail coverts, and while continuing to preen, moved away to the E. No bird on the nest now 12:59 p.m, one was down towards P16, the other north of Q23. After the ♂ (north) gave a few calls N of the area, the ♀ came up from the S, gave some notes and after a moments sparing, the ♂ went onto the nest. Now 1:07, W-O/B, W/Bl and Bl/O are together at H11, mostly preening. The nest at P16.2 has nearly completely disintegrated. Apparently is no longer used even as a platform.

Fulica americana

Apr 21 Lake Temescal, 420 ft., Alameda Co., Calif. - 4 eggs in the nest at I 6.1. The ♀ gave one "poonk" from the nearby cat-tails but did not close in tight in defense. Egg #8 hatched in nest J 6.5 - young dry marked 21, too small to tag. Both parents close by. Bet no other eggs hatch, none pipped. W-O/B seems to be taking quite a beating at the hands of other birds. One O/R pounced him at K 11 and at least twice O/O got him over on the edge of the Water. Despite other birds close in, neither of these birds were seen N of K 8 today. Photographed SE birds in display by the nest today in color.

Apr 22 Jewel Lake, 510 ft., Contra Costa Co., Calif. - When I arrived at 5:50 a.m. ♀ was feeding at E 6. Shortly thereafter ♂ came out of H 4. ♀ "poonked" and swam directly across to I 4 where she went into the cat-tails. Now 6:0f, one is feeding at G 12, diving for Potamogeton. Examined area I J 3 & 4 for nest, none, went to nest at H 25.19. Bird on the nest, flushed off and was the ♀. These eggs seem smaller than they generally run. She poonked and churred close to the nest the ♂ came splattering & ~~charging~~ charging across from E 27, but was not as active in nest defense as the ♀. Now 7:15, the sun is on the lake, one south bird has been in sight

GULLION
950

Apr 22 Jewel Lake, 510 ft. Contra Costa Co., Calif. — at G12 for awhile but is now gone. What looks very much like a display platform at C13.11. It is almost identical to the one photographed a Lake Temescal (B23.13). It is composed of a bunch of broken up cat-tail leaves on some coarse floating stalks. Some green stuff worked in but not much. Some fecal matter on the edge of it. If this S pair has a nest, and I believe they do, it must be the the early stages of development or incubation since they give no sign of defense on even interest in any area. I checked F9, also ABC12 to 17, F+G 3+4, without getting a rise out of either bird.

— Lake Temescal, 420 ft., Alameda Co., Calif. — 5 eggs in nest I6.1. ♀ nearby poonking and churning (8:36 a.m.). Some sort of an elaborate platform at I6.5. Not a nest, but looks like a display platform. Probably has been here for several days unnoticed. SE ♂ was pukking at me while I am examining this platform. A new nest at J7.21, about 5 feet from the platform. Well formed cup etc and ramp facing to W. ♀ on nest J6.5 with one yng. Egg #1 + 7 broken, both rotten. Yng left nest. Got into nest Q22.13, found + marked 7 eggs. ~~the~~ Both birds were in very close in defense of the nest. O/G + G/R both on territory,

Apr 22 Lake Temescal, 420 ft., Alameda Co., Calif.
saw red billed O/Be, but most of the red is gone, just very large scar on back of neck. Also W/Bl was around. Didn't see W-O/B or O.

Apr 24 Lake Temescal, ~~—~~
7 eggs in nest I 6.1. The ♀ intercepted me as I came into the area and was much concerned over my ~~m~~ presence. After about 5 minutes (9:00 a.m.) the ♂ seems to have joined her. Nest doesn't seem to be any more built up since the 22d but the ramp is very much better developed. Perhaps recently so, since it is composed of very wet material. As I move into the J 6-7 area the SE pair meets me. They are doing a lot of billing and generally seem somewhat concerned over my presence near the new nest & platform. Nest J6.5 has 4 eggs in it, all four warm. No sign or sound from the one hatched yng. Both ad. birds nearly but neither overly concerned about my presence. They are swanning some, but not churning or making any vocal protests. Nest Q22.13 has seven eggs in it, ~~but~~ all are warm; the ♀ was on the nest. As I moved down towards the nest area the ♂ came charging down from P16 to swan near the nest. After I left the nest, both

GULLION
950

Apr 24 Lake Temescal, 420 ft., Alameda Co., Calif.—
birds swam around in the inlet area.
After a couple of minutes the ♂
went into the cat-tails at ♀23.6
and pushed and flapped a foot
for nearly a minute while the
♀ swam near the nest. Getting no
response from her he came out, she
met him, they both swam over
to the nest area, around to the S
side, and one went onto the nest.
The ♀ is on the nest, the ♂ swimming

Dps 24 Lake Temescal, 420 ft., Alameda Co., Calif. -
nearly at Q 21. The ♂ shows no inclination
to leave this area so long as ♀ remain
nearby. The ♀ of this pair is noticeably
smaller than the ♂. As ♀ started to leave
the area, the ♂ called her off the nest,
and both swam abreast me for a while.
Both have large shields, but hers is
smaller. Hers seems more rounded at
the bottom, his more square, but
I don't think I could separate them
on that character. She returned to
the nest after a short absence.
Although the platform at P 16.2 is
completely defunct, when I waded out
to it the ♂ responded immediately
by punking and moving down to
this area, then maintaining patrol
off shore while I stand here writing
this note. Both birds of the E pair
have bright yellow legs. Among the
M pair, at least one has yellow legs,
whether ♂/♀ does or not I am not
sure. The local population seems
much reduced now. Thus far this
morning I have been able to account
for the SW, SE, M and E pairs,
plus W/Bl and 2 or 3 on the NW side of
the lake. The N ~~one~~ pair seems to
be gone, and I have not definitely
accounted for the W pair this morning
Just now 10:00 am, SE bird (♂)
chased both M birds from L 9.2 to
K 11. ♂ mode no reply but M ♀ cackled,
SE ♂ went back home.

Fulica americana

Apr 24 Lake Temescal, 420 ft., Alameda Co., Calif.
O/G has apparently lost his tags over the week end. Two well scarred birds are on the lake. One is obviously O/Bl, tho all the red is gone from her bill, and O/G having been on the W area is now unaccounted for but, a recently scarred bird is, which must be O/G. I wonder what has happened to O. No sign of him on the lake. 3 coots chased out of D33 + 34 - one went off down the lake, but the other two went out only as far as F33 where they stopped to bill and preen. Now as I stay quiet they are coming back into the ~~cat tails~~ wildcats at D33. There must be about 17 coots on the lake today, ~~co~~ considering those counted and those on territory and not seen. At 11:00 a.m. a bird is on nest J6.5, but does not seem to be sitting tight. I suspect it is brooding the 1 yng. When I felt the eggs a while ago they were warm but not as hot as when being really incubated. Now opposite nest Q22.13 11:05 a.m. the ♂ is watching me closely. He has a shield the shape of class 3 whereas the ♀ is more in class 2. W/Bl seems to be regularly chasing W-O/B back and forth down the middle of the lake, from about J22 to J14 and back. I dont know what the conflict is.

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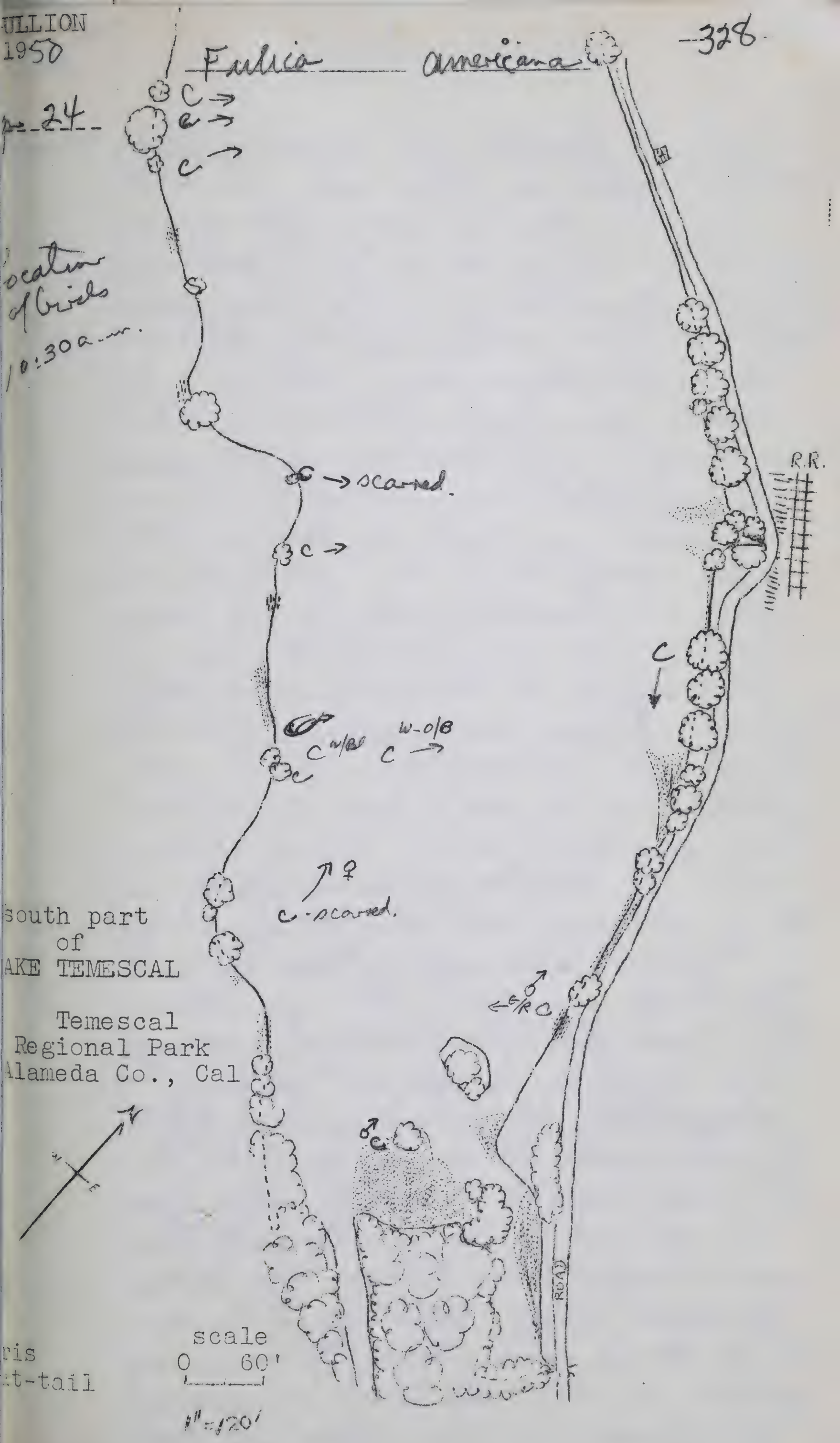
-328-

Fulica americana

p. 24



south part
of
AKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

ris
t-tail

GILLION
1950

Apr 24 Lake Temescal, 420 ft., Alameda Co., Calif. — E ♂ has legs that are almost orange, suggesting very old age. The ♀ is sitting tight on her nest. E ♂ now feeding at 9 2 3 16, eating dead partly rotted cat-tail stems. Its material he is getting from under the water that is easily broken up. There should be no shortage of food now, with stalks of Potamogeton nearing the surface in most parts of the lake. The E ♂ having been gone for a few minutes is now coming N directly to the nest area then around to the W, between the P23 point and on north. No notes. Now 11:54 E ♂ coming S by the nest, and in to look at me; a quick look and he drifts S. Now 12:02 p.m. E ♂ is feeding on algae at R23. 1/. Now 12:07, for the first time since 11 a.m. the ♀ on the nest is "pooping" as the ♂ swims by. At 12:10 p.m. the ♀ got up and silently left the nest. The ♂ "pushed" as ~~she~~ he followed her to P23 where she dived for Potamogeton. At 12:11 he was on the ramp, carefully adjusting things as he goes, finally settling down at 12:12 p.m. E ♀ took off north after making one check to see that the ♂ was going on the nest. She broke off a piece of dried leaf from a nearby cat-tail ~~stem~~ before moving off.

Fulica americana

Apr 24 Lake Temescal, 428 ft., Alameda Co., Calif. —
The shift was silent except for the moment the ♂ followed the ♀ just after she came off the nest. No display or vocal routine, one just gets off the nest, and the other climbs on. 12:19 p.m. a Sw bird just chased a ♂ mallard out of its area, then returned to I 7 to display at something. The ♀ has not been back near the nest since she left at 12:11 p.m. (12:25 p.m.). When I was back near the nest at 12:42 p.m. ♀ was bringing a piece of cat-tail across from P 23.15 towards the nest. She dropped it when I appeared and moved down to R 23.11 to feed on algae. Then she moved back out, flagging an old dried cat-tail for a moment before moving on out to P 22 from where she moved S. The shield on the ♀ is in class 9 rather than 2. She left the nest area going S about 12:45 p.m. Now 1:16 p.m. the ♀ is "pooning" down towards P 16. At 1:21 p.m. ♀ came up to Q 21.24 the ♂ on the nest pulled two and left the nest. She picked up a couple of pieces of dry cat-tail, was met by the ♂ as she brought them in to add to the nest. At 1:24 p.m. she was busy working the stuff into the nest, was finished by 1:25. She was silent during the exchange. The ♂ went off to

Apr. 24 Lake Temescal, 420 ft., Alameda Co., Calif. — the N and then returned to perch for a short time by the nest, and then move on south. About 1:20 C.S.T. was driving W-O/B out of the W area. He really trounced him royally, the latter finally going to F19 after having been pursued on and under the water from H14. Now 1:35, E ♂ is in the nest area for the second time since he left the nest. He is feeding at Q23.19 and thereabouts. Now he is bathing at Q23.13, enjoying himself. At 1:45 he is preening at Q23.13. has been for about 10 minutes. Finally at 1:50 he quits preening and moves over to the S side of the nest area. The ♀ "boonked" four times but sat tight, he patrolled just out of the area, but she didn't come off. 1:53, the ♂ is pushing at Q21, then moved N by the point at P23, ♀ did not respond. Now 1:55, ♀ gave a couple of low "grunts" the ♂ responded immediately by moving from the P23 pt into the inlet opposite the nest, facing me. Then he moved to R23.11 to feed. He's still there, preening now 1:59 p.m. Now 2 p.m. he has moved to the point at P23, where he pushed twice and then dived. Now 2:01 he has moved around to the S side of the nest and is going S. Now 2:10, E ♂ back in area, was feeding at R23.11, then moved over by nest and finally off to the S.

W. GULLION
1950

Ap-24 Lake Temescal, 420 ft., Alameda Co., Calif. — At 2:23 p.m., the E ♂ at ♀23.11 gave a "puhh". He is resting and preening in the shade. Now 2:27, E ♂ moved over near the nest, ♀ pounded 2 or 3 times, ♂ gave a few high "puhhs", ♀ came off the nest after the ♂ was already on the ramp. He adjusted cat-tails as she moved off, slide from P21 to P17. ♂ quickly settles upon the nest. E ♀ has been in area ♀25 for the past little while. Now at 2:55 another change, this one completely silent. The ♀ moved into the cat-tails and I would not have been aware of the shift but for the sound of the ♂ walking down the ramp. Now 3:10 p.m. E ♂ still in general nest area. 3:30 p.m. E ♂ has been out of area for awhile but is now close in S of the nest. E ♂ (3:35) is preening at ♀23.13. 3:38 - E ♂ pumps 3 times, came not apparent yet, he's still in the same position. About 3:39 he left, went to point P23, then started S towards P17. 3:46 E ♂ back at P23. After feeding there for about 3 minutes he looped around to the S side of the Nasta area and then moved up on the ramp - 3:49 - The ♀ made no noise but the E ♂ gave quite a series of low "puhs". By 3:50 he was settled. The ♀ moved off the nest, out to P23 and S,

Apr. 24 Lake Temescal, 420 ft., Alameda Co., Calif. — I quit watching the nest at 4:04 p.m. the ♀ had not yet returned. When I moved down S I found her at P/5 - giving the "punk-unk" note several times.

Apr. 26 Same locality
Having arrived at 4:05 a.m. - still can't see to write - it was too dark to really see any activity but could hear splashing in the general vicinity of the E area nest. At 4:23 heard some low grunts from the nest and the noise of birds clambering around on the nest. A bird was seen to come out of the cat-tail clump, so I suspect a change took place. (Sure will be nice to see what I'm writing). - at 4:30 the E ♂ gave 3 "punks" at P 23. So the ♀ is now on the nest. Now at 4:42 another coot is sounding off at the S end, again a ♂. Now 4:50 another coot sounded off in the W area. 4:53 a E bird (♂?) came around the point at P23 and down to the nest area, in to patrol against me. No notes. He finally gave 3 "punks" before swimming S. 5:55 it is now light enough to see

W. GULLION
1950

Apr 26 Lake Temescal 420 ft. Alameda Co. Calif. —
Out on the lake quite clearly, but the lines on this page are just barely visible. 5:05 it is fully light now, easy to see lines on this page, the coots have just become really active in the last few minutes. The W pair and M pair have been noisy and one ~~of the~~ SW bird could be seen out feeding. The E ♂ is still S. 5:15 a.m. S ♂ has come back to the nest area. At this same time W-O|B w/UNM was seen at F19. 5:20 E ♂ was at R23 feeding some but not very busily feeding. Now he "pumps" several times. 5:21, a bird is paddling across the lake. At 5 a.m. ~~[illegible]~~ some crowing and general noises were heard at the S end. 5:25, a couple of Coots could be heard not too far S along the E side. E ♂ at Q21.24, E ♀ on nest gave several "pumps". Now 5:28 a.m. 2 ♂♂ 1 ♀ mallard landed in E inlet, are giving E ♂ a bad time, but he is showing no aggression, just uneasiness. He is close in on S side of nest clump. 5:30 he is still there, swimming with his head erect, tho the Mallards have all just left. Now 30 seconds later 2 ♂♂ 1 ♀ Ruddy Ducks come in to Q22.21, he watches them closely, then after about a minute chases them away, not charging, then finally he presses one so closely it has to dive, so they moved out. Now 5:33 he is back in position. He gave a plaintive "pump" and moved a little way out, then back to

Pg. 26 Lake Temescal, 420 ft., Alameda Co., Calif. —
the nest area. 5:35 he moved to ♀20 then
made a little loop then ♀ again. 5:40
he has been back in the area for a couple of
minutes now. 5:41 here come the Ruddies
in again, he started out as if to cut them
off then went to the point at P23. The
Ruddies later moved off N (5:42). 5:44
he is back in the nest area again, passed
by and moving on south. 5:50 he
returned to the nest area and is feeding
on the edge of the nest clump. 5:54 the ♀
is giving several low "grunts" as the ♂
swims past ♀ of the nest, then he took
out around the P23 point to drive at
♀24. Now he has moved back (5:59) to
♀23.13 to preen. 0600 sun is
now on the tops of the trees high above
the W side of the lake. 6:05 he left nest
to ♀25 - now 6:09 he is back to S of
nest clump. 6:13 he is feeding at ♀20.4,
now he has moved on S. 6:21 he returned
to the nest area, stayed for a moment
before moving on to R23. By 6:26 he
was back S of the nest area again. At
6:29 the ♀ was giving some pookks on the
nest. 6:33 after being N of P23 for a couple
of minutes ♂ returned to ♀23. 6:39, ♂
at ♀23 gave 3 "pukks". 6:40 sun is
on the cat-tails at ♂ P23. 6:49 ♂
came S from P23 to P21, then turned
N and back to nest area. 6:52, he has
gone to R23. 7:01 ♂ just passed E
of nest clump on way S. A short time
later there seemed to be a little disagree-

Fulica americana

Apr. 26 Lake Temescal, 420 ft., Alameda Co., Calif.—
ment down the line. The sun is now pretty well onto (7:07) all th ♀22 nest clumps. 7:07 the ♀ on the nest just gave a series of "grunk-unks"; but seems to have gotten no response. 7:12 here comes the E ♂ N. in charge ~~of~~ the nest area, no, stopped + returned to it. He passed finally on the E side, going to R23. 7:16 he returned by nest area, then went on S. 7:30 S ♂ coming back to nest area, went on by N apt P23. 7:39, E ♂ flew down from about ♀27 to attack a pair of Mallards at P22. They moved off S and he fed along shore at ♀21. He just dived, brought up a cat-tail ~~leaf~~ leaf and is now feeding on the ~~white~~ white base. 7:48, he has moved to ♀24.25 where he is now feeding. 7:49 he is moving S at P20. 8:13 E ♂ back in nest area. 8:15 he charged me as I moved in to sit down at R21, swanning and all. Now 8:17, he is at ♀23.13 preening. Incidently, when he was near the nest at 8:13 the ♀ was "grunting" and he was in the cat-tails there, but there was no change. Saw 5 or 6 birds of the flock at D38 or thereabouts. 8:27 a ♂ Ruddy climbing on the cat-tails at ♀23.11 has the E ♂ at ♀23.13 interested. He went over after it. The Ruddy dived and he went down right behind it. He came up at P23.17, the Ruddy at about ♀22.13, and then moved off S. Now, 8:39 after being continuously in the area since 8:13, the E ♂ is going S towards—

V. GUILLION
1950

Fulica americana

Ap-26 Lake Temescal, 420 ft., Alameda Co., Calif. — P16 again. 8:46 a.m. the ♀ on the nest is "punking" "punk-unk" "punk-unk". No response. Now 9:03, E ♂ is rapidly moving to the nest area, the ♀ ~~pumped~~ several times as he approached, and changed to a series of "punts" at 3 second intervals after he passed. Now the ♂ at ♀ 24 is punking, the ♀ (9:05) "punking" on the nest. At 9:07 E ♂ came around at P23, waded into the cat-tails there to feed. The E ♀ made "punts" or "poonks" for about 2½ minutes at 2-5 second intervals. 9:10 a.m. two crows from the S part of the lake. 9:12 - ♂ pacing at ♀ 23.13, ♀ started "punting" on the nest again. Train came up the tracks, 9:13 a.m., ♀ got off the nest, ♂ came over gave a nervous "puhk" "puhk" "puhk" followed the ♀ a short distance towards P23, then returned and clambered up on the nest, being settled by 9:15. The train is still sitting on the tracks behind me, two engines making noise. ♀ took off S along the lake, she gave one low "punt" just before leaving the nest. 9:20 a SW bird was trying to chase one of 4 mallards out of the area, but was not successful, so he gave up. W/Bl just bowing with Bl/O at G 18, no billing or nibbling. 9:34 a ♀ Mallard at ♀ 20 was chased out by the E ♀, then she looped back to chase the ♂ Mallard out. Now the pair of mallards have come up and into the E

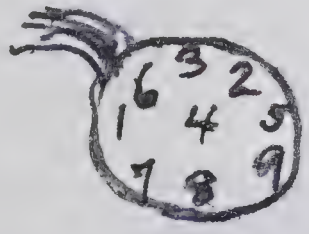
Fulica americana

Apr 26 Lake Temescal, 42 ft., Alameda Co., Calif. — inlet, so far without getting any response out of a coot. Now to Mallards a dripping S to Q20. 9:46, the ♀, down along the shore S, first gave a series of "punk-unks", "punk-punk" etc. No response from the male. ~~She~~ A SW bird just attacked and chased both W birds from G11 to F13 where the SW bird displayed. 9:51, the ♀ flew from P16 to P21 carrying a piece of cat-tail leaf about 2 feet long. As she approached the ♂ pumped twice. She came directly into the ramp, and as she did he came off, she "punked" a couple of times, he went to P23 then looped back south. He looped back to P23, "punked" a couple of times and settled down to feed. 10 a.m. - the ♂ after preening etc at Q23.13 ~~sat~~ for about 4 minutes, he starting pulling on the cat tails, finally got a suitable piece of dead one, about 4 inches long, and carried it to the nest, approaching the S side around the west. He went in to the ramp, the ♀ reached down and took the load from him, and he adjusted a couple of the leaves on the ramp then turned and swam off to the S. Photographed the Q22 nest clump for video I am sitting in color. 10:08 W-O/B moving into N21, caused E ♂ to charge out, then splatter into attack. W-O/B dived, the E ♂

Apr 26 Lake Temescal, 420 ft., Alameda Co., Calif. — was right behind him, chasing him out to about L20. W-O/B then moved on S to K16. E ♂ then moved N — flew somewhere, lost him, then came flying back to land at O23 and cut into the cat-tails. He seems to be on the alert and hunting for something, he is paying no attention to a ♀♂ Ruddy coming into the E inlet. Now he sees them and a chase is under way. As he came up to the ♂, the Ruddy opened his bill and started to look aggressive, but the Coot swanned and the Ruddy dived. E ♂ then moved off to the S, after watching the Ruddy swim under him. 10:24 E ♂ back in nest area, passed on N didn't hang around. 10:25 he is back at P23, diving for food. Now he is eating some more dead cat-tail material. He is ignoring three turtles in the area, but the turtle nearest where he is now bathing Q23.13, became uneasy and moved off a ways. W/Bl feeding at ~~[illegible]~~ J13 while the W pair feed at H11. Now they are billing in the same area. 10:36 — E ♂ has been in nest area, that is P-R23 since 10:25. Now, 10:40, he is moving S from P22. A pinned bird which a assume is G/R, (other tag lost) just chased W/Bl from J12 out to about J16. Now 10:50, O/G chased W-O/B out from F16.

GULLION
950

Apr 26 Lake Temescal, 420 ft., Alameda Co., Calif. — 10:58, the E ♀ is "punking" at the same time the E ♂ is coming N at P20, as he went by to the W she went off the nest and joined him. He started giving his plaintive kuk, kuk, kuk as he followed her around the P23 pt. to P24. She poonked a couple of times and he returned to be settled on the nest by 11:02. Din through here for now. Nest I6.1 with 9 eggs, all warm, ♀ in close, poonking.



Photographed this nest BW & color. — see page 522.

Checked nest P6.5, 4 eggs still present warm as if being brooded but not incubated. No young around, photographed displaying adults in BW. — see p. 456 —

Apr 27 Jewel Lake, 510 ft., Contra Costa Co., Calif. — At the lake at 1:30 p.m. — no S pair birds visible. In fact, I've been here for 15 minutes and have not seen a Coot yet. The platform at B14.5 (formerly C13.11) is still active and under repair. Can't raise any response from any birds today. 2:30 p.m. been here for an hour still no Coots. Nest M25.19. — two eggs missing, hatched? — #6 about 3 pipped, yping whewring inside. 4 other eggs present and warm, none pipped. At least the ♂ parent was close by, "punking"

W. GULLION
1950

Fulica Americana

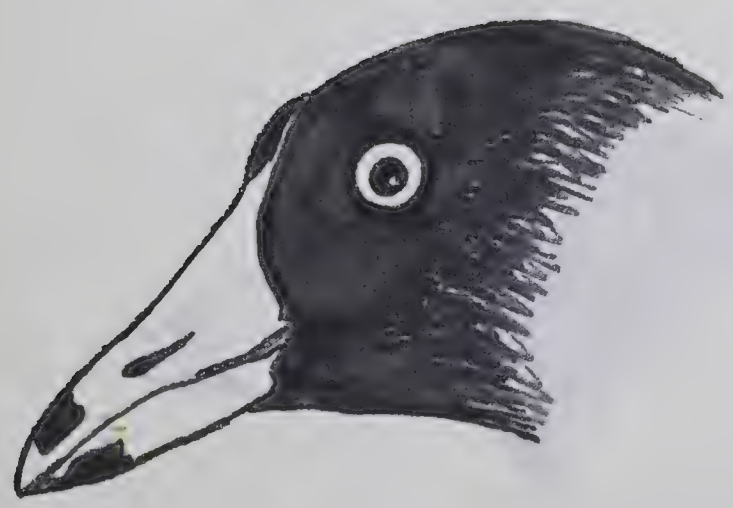
341

p. 271

O/Bl - 3/17/50

p. 269

LG/Br 3/17/50



p. 270

P/LG - 3/17/50

H. W. GULLION
1950

Fulica Americana

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p. 346

O/Br. 4/3/50

p. 348

♂ - 4/19/50

p. 347

♀ - 4/19/50

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1950

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p. 348

Y/LB - 4/19/50

T96

SS

p. 289

Y/LB - 4/2/50

T96

T96 p. 289

Y/LB - 3/17/50

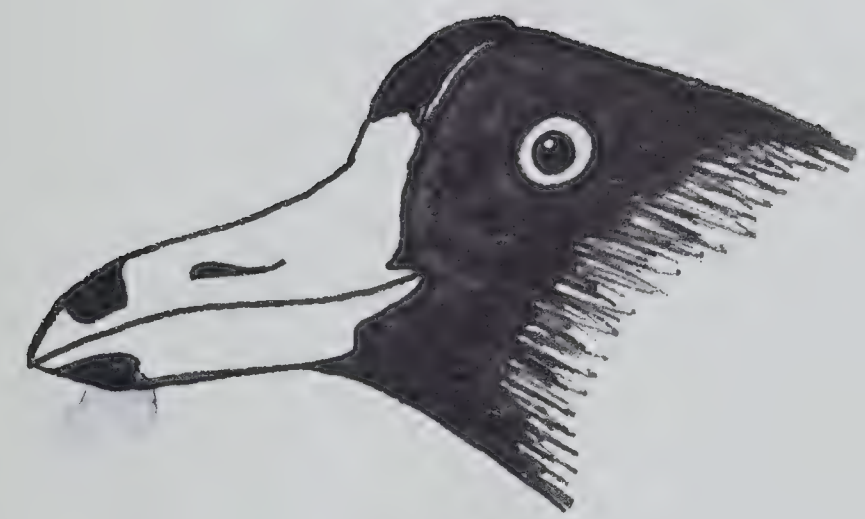
W. GULLION
1950

Fulica Americana

344

p 273

G/C - 4/3/50



p. 273

G/C - 3/17/50 -

N. GULLION

1950

Fulica Americana

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p. 347

X/R - 4/3/50

pages. 346-348

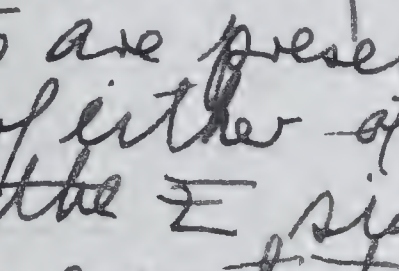
see photographs

I. GULLION
1950

Fulica americana

April 27 Jewel Lake, 510 ft., Contra Costa Co., Calif. — while I examined the nest. As soon as I was out of the water the defense ceased and it became quiet again. Both N adults are present, but so far no sign of either of the S pair. I still have the E side to work but I don't expect to find anything. Just now a coot came out from the E side, at about B 22 so at least one S bird is here. Now a N bird is chasing S after it. The chase led out into the cat-tails at C 13 and the N bird went in after it. The N bird hunted along the edge of the cat-tails to D 12, then gave up and returned N by way of H 7. Apparently no territory defense by the S bird at all.

Ap. 28 Lake Temescal, 420 ft., Alameda Co., Calif. — Nest 16.1 with 10 eggs. Full clutch?



These eggs are not as warm as they should be. One #1 is quite cool. The ♀ gave one "poonk" a short distance away in the cat-tails, but no alarm or real concern as should be shown now. The platform at H 7.25 is composed of a great mass of material, but not particularly well taken care of. Now as I examine the platform, the ♂ & ♀ are just outside the cat-tails, the ♂ churring.

p 350

see photographs

Apr. 28 Rabe Tomescal, 420 ft., Alameda Co. Calif. — 3 eggs still in nest P6.5, other egg had rolled out of the nest and was cracked lengthwise. It was floating in the water nearby, rotten. One of the eggs is still warm in the nest, but another is quite cool, in fact all three are too cool to be under further incubation. Eggs = 3, 4 & 5 still in nest. Flies are on them. No sign of yng, but both parents in the area, displaying. The ♂ especially. At 3 p.m. when I approached nest ♀22.13 the ♀ was incubating. As I walked N along the road the ♂ came along broadside to me, "swimming". He was immediately in there, on the defense when I started out to the nest. The ♀ stayed on the nest until I was almost to it, then she came off towards me. As I ~~st~~ reached for the nest she struck at me, touching me outstretched hand, then backed off, away from me with a great deal of churring and growling. The ♂ was behaving in the same manner. I pulled a few cat-tails from in front of the nest to facilitate observation. Now 3:14 p.m. a bird is settled back on the nest. About 3:10 the ♂ chased the ♀ to ♀23.13 giving a series of high pitched "kuk, kuk, kuk" notes. The bird ~~that~~ sitting on the nest is facing N. Now the other bird is taking off S. Apparently it has some territory to defend. It is in

Fulica americana

Apr 28 Lake Temescal, 420 ft., Alameda Co., Calif. - The alert head up position. The ♂ is the bird on the nest. The ♀ was just leaving "pooping" down near P16. The ♂ has a shield (♂) while the ♀ shield is thus - (♀). With a good observation it is possible to distinguish these two birds by this character. Territory between the W + M pair seems to be breaking down. For the last ten minutes G/R has been feeding at G10 while ♂ feeds H12, with no sign of antagonism. 3:30 p.m. E ♀ has come N to Q20, is pooping and going back S. 3:31 she is still there. ♂ came over from G17 to reach H12, not charging but moving with a directness that suggests attack, but when he got there no attack was pressed. Now, 3:33 E ♀ is just S of the nest. Now she has gone on to P23 and North. Now 3:36 I'm leaving to get my gear for an all night stay. Back at 3:55 p.m. for night. Apparently both birds were either off the nest before I arrived or the nesting bird got off when I arrived. Both were swimming in the E inlet, silently and close together, picking up (insects?) off the water surface. At 4 p.m. the ♀ went around to the S side of the nest clump and was settled on the nest by 4:01 p.m. The E ♂ moved

Fulica americana

Apr 28 Lake Temescal, 420 ft., Alameda Co., Calif. — in the area for about 2 minutes before going N around P23. Noted that the apparent depression of crown feathers is not a fact. The impression of such is obtained by the ♂ ruffing or erecting the feathers on the neck. I shall have to check this further. Now 4:05 E♂ bathing at Q23.12. The E♀ can not erect the neck feathers to any realm extent. Perhaps this is true of all ♀♀. I have noticed, watching this nest and the one at P6.5, that birds going onto the nest always use the ramp. And except in emergencies, birds leaving the nest also use the ramp. The ramp on nest Q22.13 faces south and extends about 2 feet from the nest. Several times the bird coming to the nest has been seen carrying more material to add to the nest. And it almost always takes about 1 minute of fixing and ~~adjus~~ adjusting before the bird is ready to settle upon the nest. 4:13 p.m. the S♂ is moving around at P20, started S but is now going back N. 4:17 p.m. the ♂ at Q23 is pukking, 3 times. I have seen W/Bl and the pinned ~~pa~~ bird (G/R) and two marked birds O/G & O/Bl, but no sign of W-O/B or O. W/Bl and a marked bird (O/Bl?) are at H 11 maintaining close company. ~~the~~ 4:25 the E♂

I. GULLION
950

Apr 28 Lake Temescal <20 ft. Alameda Co. Calif. - dived near the nest clump a couple of times and then passed S. At 4:29 a couple of "puhk"s were heard from near P16 and at 4:30 the ♂ is coming back towards the nest. 4:33, I stood up to put a shirt on, the ♂ immediately got in an aggressive position just S of the nest. 4:35 he left the nest, going to R23. The ♀ sitting on the nest is facing N. 4:37, he is diving for and feeding on decomposing cattail stalks. At 23.17. He seems to have quite a taste for them. It seems to be the stems not the leaves that are eaten. 4:40, as ♀♂ Mallards fly around overhead, the ♂ at P23.11 gives a couple of puhts. At 4:44 p.m. the ♂ went into the nest clump at the S, gave some low "puk, puk" notes, the ♀ responded by getting up and off the nest and the male crawling on. She went to P24 found a pair of Mallards there and routed them, chasing the hen first and then the drake. When the ♀ leaves the nest she goes away and stays away for long periods of time, but the ♂ seems to stay around close enough to be able to reach the nest quickly. At 4:59 p.m. a "pronk, pink-unk" down S. ~~[illegible]~~. 5:0[illegible] p.m. a bird (~~[illegible]~~) feeding at P17 under the willows, tipping for

Apr 28 Lake Temescal, 420 ft., Alameda Co., Calif.- something. 5:09 a hen mallard w/10 yng came working by the nest clump. The ♂ had his head erect but seemed to be taking no especial note of their presence. Some of the ducklings were within 3 or 4 feet of the nest. The E♂ gave no note nor did the ♀ ~~down~~ indicate any interest in the Mallard brood passing close to the nest. The E♀ has been at Q25-26 all the while, so the bird heard S and seen was an interloper. At 5:21 the E♀ chased a pair of Mallards a few feet at Q25. The E♀ just "poonked" at P or Q23 while the Mallard brood is at Q25 moving N, the hen leading. The sun is right into my eyes across P23, so I can't see much out there. 5:35 p.m. the Mallard brood is feeding along the N edge of the cat-tails at PQ23 while the E♀ is at Q23. 12 or 13. She "poonked" three times, got no response from the ducklings, and pressed the matter no further. 5:40 p.m. the Mallard brood went on south, apparently without incurring any Coot trouble during the 30 minutes they were in the general nesting area. During this same time the ♀ Coot attached a pair of adult Mallards, and must have passed the brood while doing so. 5:44 p.m. some disagreement seems to be present

Apr 28 Lake Temescal, 420 ft., Alameda Co., Calif. - at the S end. Just heard quite a bit of crowing, punking etc. Just now 5:48 a chased from SW area to F11 and a paired display there. Now 5:49, a ♀ poonking and a couple of punk-unks at Q or P 18 or 19. Might be the E♀ but I am not sure since I have not seen her move S. Couldn't locate her in the cat-tails where I thought she was so it probably is her, now 5:54 she just moved N past P23 from further S. A pair of Ruddies are working into the mouth of the E inlet 6:11, so far no antagonism, they seem to be uncertain, but perhaps it is about my presence. The ♂ Ruddy is displaying about 6 feet from the nest, no response. The bird on the nest is now facing the ramp. A coot just crowed along the W side near D 32-33, the sun is now completely off the lake 6:14 p.m. 6:16 the Ruddies are still patrolling off the nest area. 6:25 p.m. the Ruddies left about 6:17 and now the E♀ is moving S at P22. 6:30-now a general sounding off of 3 birds 2 ♂♂ and 1 ♀ along the west shore. 6:31- the E♀ poonked and "punk-unked" at Q18. 6:34 the incubating bird is still facing the ramp. 6:38 W-O/B + a marked bird at E29. Also the E♀ just passed to the W of the nest clump and continued

V. GULLION
1950

Fulica americana

Ap. 28 Lake Temescal, 420 ft., Alameda Co., Calif.-
N. 6:45 E♀ moving out from cat-tails at Q25. 6:52 E♀ passes S at P22. 6:54 after some "puhking" etc at the S end, the E♂ came off the nest, giving ~~some~~ several "puhks". As he swam S the ♀ gave a series of low "puhk-unks", then he answered with a note that was almost a croo but never actually was. Now 6:56:30 a bird is coming towards the nest, reached it at 6:57 and settled 6:58 p.m. Now 7:05 the E♂ came up by the nest clump and passed on N, to Q23. 13. 7:11 E♂ passed the nest clump going S. a pair of Mallards passed by a little ways behind him. He got to P20 before turning, with puhking and chasing them out. He went on and they came on in, then he turned back, spotted at the ♂, chased and routed them all at P20. As soon as he went on they again started in to Q19. It's getting dark enough that I can just see the lines on the page. Also getting a shadow from the moon. This is really a bright moon tonight. Now 7:55 I can almost see the lines on the page. Just checked the platform at P16.2 - it has the ♂ on it. 8:58 p.m. checking P16.2, no ♂, he was in the iris at P16.24. Seems to be

Apr 28 Lake Temescal, 420 ft., Alameda Co. Calif. — afraid or at least shy of the flashlight beam. Left about 10:30 p.m. no change.

Apr 29 same locality — Back at 4:10 a.m. ♀ still (?) on nest, at 4:14 the ♂ pukked 3 times at Q 23. 4:22 a ♂ on the W side "pukked". 4:29 the E ♂ moved from Q23 to the S side of the nest clump. No response from the ♀ After being near the nest until 4:35 he finally moved off to the S. 4:37, the E ♂, at P16 - is pukking about something. He gave about a dozen notes. 4:38, the ♀ on the nest is giving a series of "poonks" and "punk-unks" something like, "poonk, poonk, punk-unk punk-unk, punk-unk". No response from the ♂. 4:43 the ♂ is coming N directly to the nest area, but he stopped to feed without going clear to the nest clump, then he went on around it to Q23. 4:47 lots of Coot activity on S & W sides. Pukking, poonking and 1 crow - also the E ♂ pukking at Q23 - then taking off S. 4:53, S ♂ coming to nest clump, but again not entering it. He again went around the nest to the W and on to R23, thru to Q24. Back in nest area a moment later. 5:00 a.m. he charged out to N23 to rout 2 UNM Coots and a ♂ Ruddy. Don't believe the Ruddy really counted just incidently present.

Fulica americana

Apr. 29 Lake Temescal, 42 ft., Alameda Co., Calif. —
5:06 ♀ "poonks" twice as ♂ loiters in nest area. 5:09 ♂ moves S - 5:10 gives a couple of "punks" from near P16. 5:15 he moves back to the nest area, starts to move away but then loops back. 5:17 - he is at R23. 5:21 - he is at P23, punking, then he moves down to the S side of the nest clump. where he is facing me, in patrol. 5:34 he is still in the same location. 5:45 he is on N side of P&23 cat-tails, feeding - now 5:46 he walked over them and got into patrol just S of nest clump. Let's cont this morning: E ♂ still patrolling 5:50 a.m. 5:59 ♀ gives a "poonk" on to nest. Can't see the ♂ but he must be at P&23. 6:06 - the ♂ at P&23 gave a series of 3 low punks. 6:13 - the ♂ came by the nest, on the E side, heard some punking further S and went down to investigate. 6:15 whole west side of lake in the sun. 6:19 - E ♂ punking down towards P16. Chasing and paired display at F12 - looks as if SW ♂ is trying to regain some lost territory and is slowly working the borders of the W as a bach. Both ♂♀ W birds involved, only 1 (♂?) from SW pair. 6:25 - a pair of mallards landing at P18 immediately brought forth "punks" from the ♂ someplace down there. Tho I can't see them, the quacking of the ♀ and general movies

W. GULLION
1950

Fulica americana

Apr 29 Lake Temescal, 420 ft., Alameda Co., Calif. — from down there suggests heated chase. by the Coot. 6:31 - ♀ on the nest begins several low "puhks". Very soon the sun will be on the nesting clump. ♀♂♂ Mallards at G-7 are not being molested. 6:49 - W/Bl and two UNM birds drifting to L-17 where charged by E♂ and chased to I-17. He turned ~~on~~ & trailed directly back towards the nest area, but came upon a school of fish on the surface at P-21. No stopped, looked them over, and then swam around the school, going to the nest area. The ♀ "pumped" as he came in, but he ♂ continued on to Q-24 via P-23. Sun is on the nest clump. at 7:00 a.m. - ♂ is patrolling just S of it. 7:08 a.m. ♂ still in general nest area, just went around P-23 thus going N. The Coot does not bob its head when it swims except at times when it is on the alert and the principle of Parallax is in use. I believe that during normal swimming the head is not bobbed but rather held in an even position while the body fluctuates with the force of each stroke. Watching a pair of Mallards I note that they move their heads about as frequently as the Coot but the movement of the body is less apparent, giving their whole swim pattern a more even feature. Just heard a cackle at E-13 - 7:15 the E ♂ is working slowly S among the dangling willow branches.

Fulica Americana

Apr 29 Lake Temescal, 420 ft., Alameda Co., Calif. – G/R is at J14, showing little sign of territory behavior. 7:26 E ♂ is returning to nest area from the S. ♀ on nest is giving a low punt, punt, punt note. Just a moment earlier she poonked when a large fish jumped nearby. ♂ passed the nest and moved N of PQ23. Actually he was at Q23, resting. When I walked S along the road a few feet, he came splattering after me. Now 7:31 he is patrolling just off shore. W-O/B and O\Bl seem to be staying close together. Both were at D33 a little while ago but have now worked out to L25. O\Bl at M23 and E ♂ is going out after her from Q22. W/Bl is moving N from K17, "pukking". E ♂ splattered after O\Bl to I22, now he is returning; E ♀ gave 2 poonks. W/Bl apparently came up to defend against E ♂, when he passed O\Bl she braced and they nibbled some. Now E ♂ has returned directly to P23 into the inlet. E ♂ displayed at I22 but neither of the other birds did. 7:52 E ♂ finally leaving the nest area and moving to Q20, where he has stopped to patrol. 8:00 a.m. E ♂ feeding at Q22.17 – eating decomposing dead cat-tail stems, the algae that is growing on nearly everything in the water, and the white bases of green cat-tail stems. He had to dive 3 times before he was able to break off one growing stem to eat it. He seems

Apr. 29 Lake Temescal, 420 ft., Alameda Co., Calif. — to eat only the white bases. 8:18 - he is still feeding in the nest area, at P 21 now. I have not seen swollen feet among the swimmers as occur on many of my penned birds. 8:19 E ♂ feeding among the dangling willow branches at P 20, drifting S. 8:22 he gave a couple of quilks and came N passing to W of nest to P 23. As he passed, the ♀ started "punt"ing and raised up off the nest. But he passed by. Now 8:25 he came over, into the nest clump, started giving his "kurk, kurk, kurk" note. She responded with a couple of "punts" and he climbed up and settled on the nest. I moved to P 16 - found the E ♀ settled down on the platform at P 16. She gave a "punk-unk" and after a minute climbed off. At 8:58, as I approached the nest I found both birds off on the S side. Now the ♂ is feeding and the ♀ going back towards the nest. 8:59, she struck her head in the cat-tails, but promptly retired. Now they are both around on the W side, no the ♂ got on the nest and is settled by 9:01. ~~So, no change~~. Wrong, it's the ♀ on the nest. As I went out to the nest the ♀ came sailing off at me and the ♂ came flying up from P 16 landing at P 12 and immediately attacking me. About 9:10 a.m. I caught the ♂ when he got too close

Fulica americana

Apr. 29 Lake Temescal, 420 ft., Alameda Co., Calif. -
to me so now he's banded 496-71655 and tagged $\frac{G}{Y}$. He's got terribly sharp claws and I now have two long cuts on my arm. He's severely fighting the tags, hope he doesn't tear them out. As he fought them out in the lake several other Coots plus a whole flock of Ruddy Ducks came over to see what was wrong. Hope they don't desert the nest for this. Guess I'd better wait and see. They seem to be shying away from that nest, giving it wide berth. The ♂ has quit fighting his tags, no not yet. 9:30 a.m. 9:40 think I'll clear out and leave them alone.

Apr. 29 Jewel Lake, 510 ft., Al Contra Costa Co., Calif. -
Egg 7 pipped but not broken thru. Eggs 2, 3, 4 still in the nest unpipped but warm, still being incubated. Both parents nearly pukking or poonking.

— Lake Temescal, 420 ft., Alameda Co., Calif. -
The many boats on the lake this afternoon are giving the birds a bad time, but now 4:25 p.m. the tagged ♂ is on the nest at 22. Earlier both E birds were seen chased as far S as the mouth of the S inlet. A couple of minutes later saw a SE bird carrying cat-tails, and then a severe chase in area KL 5 & 6. Don't know who was being chased since it

W. GULLION
1950

Apr 29 Lake Temescal 420 ft. Alameda Co., Calif.
was UNM. Saw 0 in the picnic area at the S end. Apparently in good shape. Top of head still plastered down.
— 11:45 p.m. a bird is on nest Q 22 - his head is so pointed S so the tags are hidden. Checked P16, found a pair of Mallards and the untagged ♂ ♀ there.
Apr 30 - contd - 12:20 a.m. a femalish sounding "punk-unk" given several times near P16 was answered by a crow at the S end. The ♀ call may have been given by a bird from another pair. I flushed a UNM bird out of P15.12 that went off swimming S. Finally a 12:30 a.m. the nesting bird has turned so that I can see the tags on him. It is ♂. I have been hearing occasional adjustments in the cat-tails near Q 23.11 that may be his mate, I'm not sure. 1:12 a.m. flushed a bird from P16 that splattered and flew to Q 23 to go into the cat-tails. that surely is ♀.
1:14 checked bird on the nest, it is tagged. Earlier I checked nest J 6.5, it seemed to have a bird on it, tho I had a little difficulty being sure. Also flushed a bird from Q 13 that splattered towards P16 - may have been ♂. Made a loop around the S end about 2:30 a.m. Found 3 Coot, including w/Bl at F17 and one at E 13 - all in willows. They are hard to flush out of their nesting lodging. They have green

V. GULLION
1950

Ap 30 Lake Temescal, 420 ft. Alameda Co. Calif.
eye shine. Back at nest Q22 - a bird is on, but facing S, having completely turned around counterclockwise since I got here at 11:30 or so. At 3:07 a.m. 3 "punk-unks" at the S end. - ~~that's where the earlier ones must have been too~~.
3:10 a.m. the bird on nest Q22 is the ♂ by shield character, she has two tags hidden behind a cat-tail. 3:15 a.m. some poonking and pukking at the S end of the lake. 3:35 a couple of "pukks" at the S end. 4:02 a couple of pukks from the S end. 4:11 a pookk from E♀ at Q23. 4:37 E♀ at Q23 pukking. Bird at F13 pukking. 4:54 it is light enough for all colors to be distinguished, the Mallards are active and all the song birds have been in song for about 30 minutes yet all the Coots are still sleeping in. No, two are crossing to F17, probably 2 of the 3 I chased out of there earlier. 5:00 a.m. E♀ finally came out of her second choice night quarters and moved S. 5:04 E♂ "pokked" on the nest, a bird at P16 gave the "punk-unk" several times.
5:06 a W bird routed w/Bl & an UNM from near G16. Most of the Coots seem to be out and active now.
5:11 - seems to be quite some conflict at P15-16. 5:14 - the E♀ came back to P23 - at 5:15 the ♂ scooted of the nest to join her at Q24. Now, 5:18 they

Apr 30 Lake Temescal, 400 ft. Alameda Co. Calif. — are both going to P16. Now a pair of Mallards are in the E inlet. Yesterday's tagging just may have broken the spirits of both birds. The ♀ was giving me extremely wide berth this morning, looping out to O21 going both ways. Now 5:20, the ♀ is coming back N, I hope to go on the nest. No she's going right by it, to Q23. She's standing on the platform there, pinking at the nearby Mallards but not attaching them. 5:24, here comes the tagged bird N. cutting into the nest area, now E of the nest clump, on over to Q23, passing but not attaching the Mallards. Now 5:28 the UNM bird is going near the nest clump, cautiously, swimming just S of it, now E of it, feeding there, gave a "pink-ink", another, started into the cat-tails, retired, now the tagged bird is coming over, turned back, the UNM chasing him. Now the tagged bird is feeding just E of the nest clump, the other on its SW side, now they both are heading towards P16. Guess I'll go and ~~at~~ let them get settled before eggs get cold. — 5:35 a.m.

Notes — I'm still not sure which sex is tagged. The bird that was off the nest last night seemed to be responsible for a lot of ♀ sounding calls while several ♂ notes were heard from near the nest area and presumably the tagged bird. Yesterday I thought I had caught

see p. 371.

Fulica americana

Apr 30 Lake Temescal, 420 ft., Alameda Co., Calif. — the male in the grab — but then thought I heard ♀ notes from it and so dubbed it a ♀. I'll have to check this further. One thing seems certain, and that is that the bird on the nest at dusk is still on at dawn and probably is not relieved until about 8 or 9 a.m. The bird leaving early this morning was clearly one of fright, for it didn't even bother to use the ramp. Of course it had a flashlight beam in its eyes about every 15 to 30 minutes from about 11:30 p.m. to dawn. Also, Coots must be among the last of the birds to become actively foraging in the morning.

May 1 Univ Calif. Campus, Alameda Co., Calif. — W-R - legs ~~YG~~, becoming YG, a little on the G side still, shield 8 SS, tho small, this shield is perhaps out of the SS class and actually an S shield, bursa ——— mm. couldn't be probed, feet badly swollen, temper mild, new style tag seems to be doing OK. G-Y/B - shield 3 almost flat, still very slightly swollen, regressed from last check. Legs becoming YG - but still quite G. Bursa 23 mm. feet in pretty good shape. P/O - shield class 3S, legs YG, feet in fairly good shape, bursa 15 mm. O/Br - shield 5S - this is a strange shield, swollen but still a

GULLION
PSt

May 1 Univ. Calif. Campus, Alameda Co. Calif. — small colored area, legs YG, feet on this bird are in bad shape, that is the toes are, bursa 20+ mm. P/LG- shield ~~EGS~~ 3S5, legs G but becoming YG, temper bad, feet in fairly good shape, tag seems to be staying in okay, bursa 16 mm. G- YG - legs YG almost Y, shield 1/S, temper not bad, new style tag seems to be staying on pretty well. bursa about 10 mm., feet in good shape Yr legs green but showing a yellow tinge (Yr. that is), shield 6 S, bursa 22 mm. feet in good shape, temper kinda bad. Br- shield 7SS, legs G, little if any yellow present, bursa 20± mm. W B- shield 3S, legs green with a faint suggestion of yellow, feet are in good shape, bursa 22± mm, temper not bad. Y/G - shield 9S legs YG, with the Y still light, feet in good condition, bursa ±20 mm, temper not bad. V G- shield 9S, legs Y, feet in good condition, temper fair, bursa 8± mm.

— Jewel Lake, 510 ft., Contra Costa Co., Calif. Arrived here at 5:15 p.m. (PST). No coots visible. A minute later a strangely acting bird came out of 1126 and moved back and forth just E of the island. About 5:25 a ♂ came out from 1122 to chase it half heartedly out to I 25. The chase displayed at least twice,

W. GULLION
750

May 1 Jewel Lake, 510 ft., Contra Costa Co., Calif.—
but the shared bird was not impressed.
and returned to N22 as soon as the ♂
went to N25 at 5:28. Lost track of
the shared bird but the ♂ went to O26
then out of sight in the cat-tails.
Now 5:34 p.m. I have not yet heard
the call of a single yng Coot, nor have
I seen one. Date to the nest at N25.19,
eggs #2, 3, 4 still present, #3 pipped
with a living young in it, but no shell
missing. Saw one yng swimming
away from the nest. It seemed to be
dry but didn't look very good
Down looked matted and not fluffy
as it should be. Both parents nearly
defending by punking and grunting
no churring & charging. All three
eggs good and warm.

May 2 Lake Temescal, +207 ft., Alameda Co., Calif.—
A bird on the nest at J6.5 at 3:51 p.m.
3:56 p.m. a bird sitting tight at
Q22 - can't tell which one, it is facing
S. It is windy this afternoon, cool,
the water is muddy, it has been
raining much of the day. About 4 p.m.
the sun came out for about the first
time today, but not long. Several
Coots seen scattered around the lake, but
no great numbers. 4:04 - the tagged
E bird is at Q23.15 - standing on
a pile of fallen cat-tails. Looking
closely at the shield and from the
"punk" just guess & think I was

V. GULLION
1950

May 2 Lake Temescal, 400 ft, Alameda Co., Calif.— night the first time when I thought I had the ♂. The tagged bird worked over by the nest clump and then was lost track of. 4:12 p.m. - now the bird on the nest is facing E. 4:27 p.m. - a bird sitting tight at J 6.5 while a tagged Mallard drake is feeding at J 7.1? 4:33 - the unbanded bird (♀) charged out to M 17 to chase back 2 invading birds, one mashed the other one not. I suspect this is the W pair since the M bird is a ♂. By 4:36 they were working back in towards P 16 again, got to M 15 before being chased out again at 4:38 to about L 14. I had to drive to escape the assault of the splattering charger. At 4:40 the M-W bird attacked W/Bl at about J 15 and chased to I 17. The tagged E bird is on the nest, the change having been made between 4:12 and 4:33 p.m. Now 4:44, the tagged bird is off the nest, sitting nearly silently in the cat-tails, as two dogs romp around me on shore. 5:59 the tagged bird is back on the nest while I went down to the N end of the lake. At 5:01 the E ♀, "peonking" and "punk-unking" at P 16 as I approached. So the bird on the nest is definitely the tagged ♂. I shall have to change my record accordingly. 5:09 another chase, last with the E ♀ moving out from P 16 holding her head upright most of the time, and only once or twice

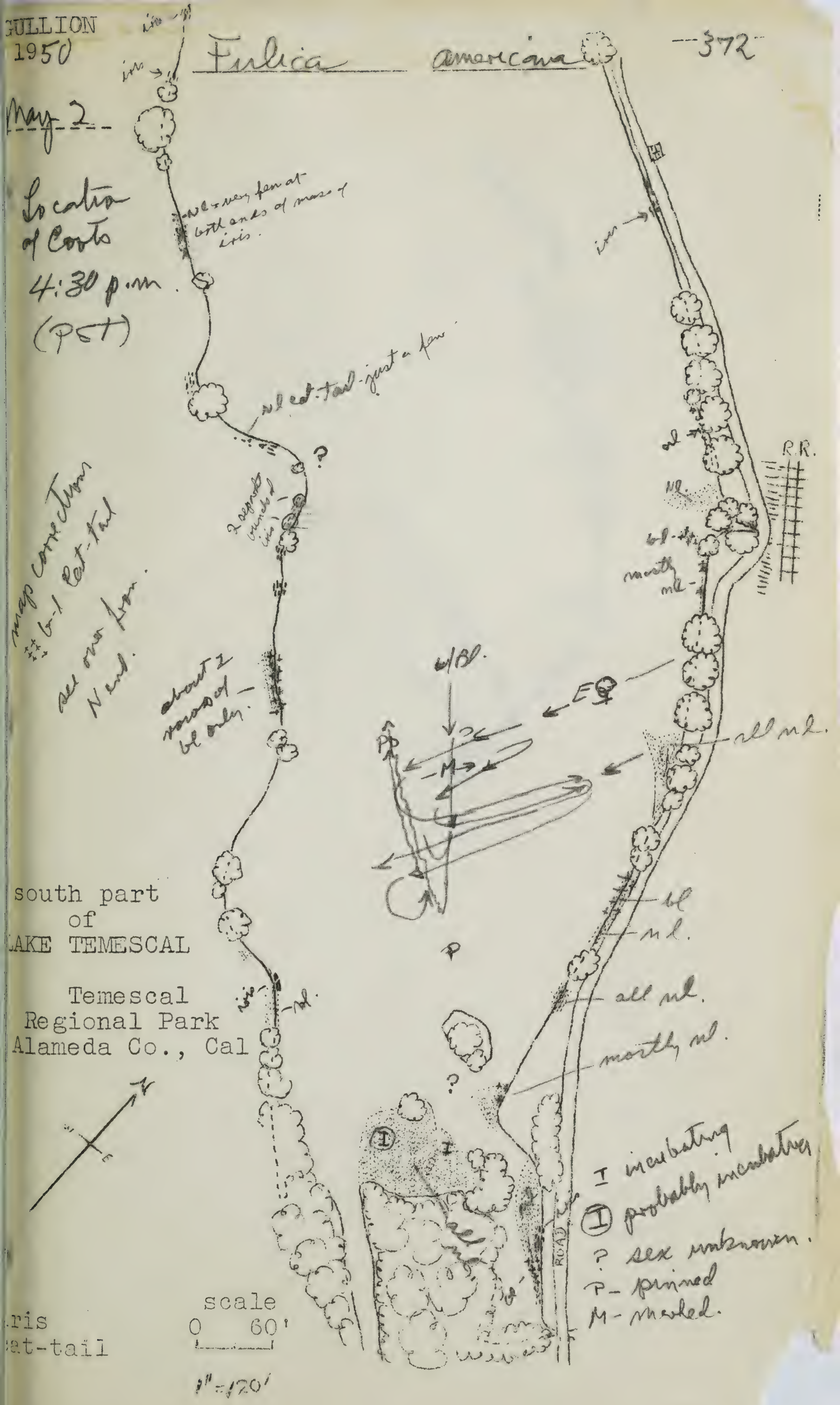
GULLION
1950

Fulica americana

-372-

May 2

Location of Coots
4:30 p.m.
(PST)



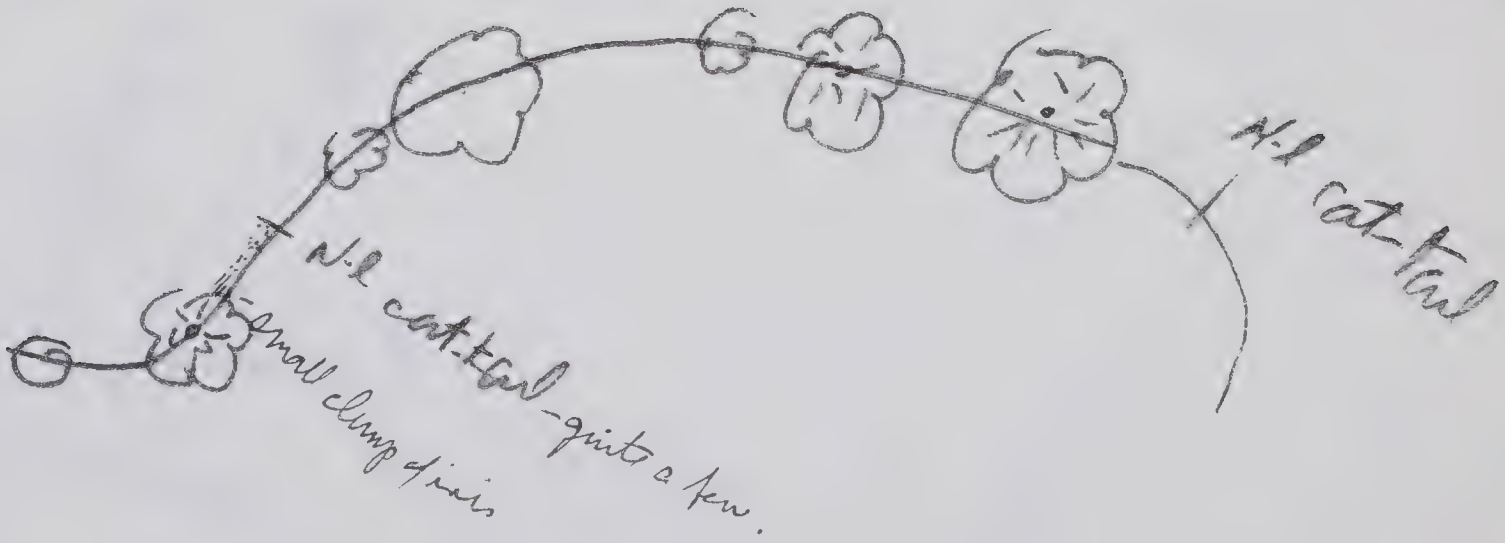
south part
of
LAKE TEMESCAL

Temescal
Regional Park
Alameda Co., Cal

scale
0 60'

1" = 120'

ris
at-tail


N.B cat-tail
N.B cat-tail - quite a few.
small clump of hair

N. GULLION
1950

Fulica Americana

May 2 Lake Temescal, 500 ft., Alameda Co., Calif.- lowering it as she closed the W pair out to J14, she then returned to N17 to patrol. Finally found W-O/B around the corner at the N end, by the flycasting floats, apparently an outcast from the population. I note that a small scared bird, supposedly ♂/o is in close company to W/Bl today. - The feathers on W-O/B seem to be losing their glue, they are sticking up at all sorts of strange positions. 5:35- WO♂ chasing W/Bl from K14 to K18 to M18 to M14 at which time E♀ flying down from M11 hit them both and sent them scooting. I am able to account for about 14 Coots on the lake today. Six are birds in resident pairs, and seven are "plants" with clipped wings, while another, W♀ is apparently hanging around because of her clipped mate. The M♀ seems to have departed, at least I have not seen a bird with the pinned bird today in the M area. Whether O is present or not I don't know. At 5:53 as I approached the nest the E♀ came pooping over from O24 to the nest area. The O♂ is now on the nest, facing NE. The ♀, still pooping, is feeding at Q23. 6:05 till now the E♀ has been at Q23 intermittently "pooping." now she moved down to the next clump but was back a moment later, and on out to P23, now back in to Q23.13, to Q23.17 back out to P23 and N.

I. GULLION
950

May 2 Lake Temescal, 400 ft., Alameda Co., Calif. -
The ♂ on the nest is now facing NW. 6:10 p.m.
the ♀ must have made a loop out onto the lake and around for at 6:12 she came up at ♀21. "pounding" at patrolling between me and the nest. Faith and spirit seems to be restored. Here comes the hen Mallard and her brood of 10 at ♀20, no she turned S. The ♀ coot paid no attention to her. It was my presence that must have sent her S. 6:15 p.m. 6:18 the ♀ quit patrolling against me and moved around to ♀23. It is cold this evening. 6:25 - ♀ stopped feeding at ♀23 - moved S to P20 before turning to come back and patrol against me at ♀22.18:23 - then onto the nest clump, "punting". 6:27 p.m. without a sound the ♀ got up and off the nest, while the ♀ was at ♀22.19, she said nothing, at 6:29 p.m. he was settled back on the nest, he had been in the water for a moment but returned to incubate further. She moved to ♀23 to feed. She is feeding on decomposing cat-tail the same as he does. The incubating bird seems to do no preening or very little fiddling with the nest. He is almost completely concerned with incubation and nothing else. 6:33 p.m. ♀ left ♀23 moving S past P20, no she turned around to come back N, rapidly but silently, heading directly for the nest clump, came in to the ♀ to patrol, now 6:35 moving

May 2 Lake Temescal, 420 ft. Alameda Co., Calif.
to the nest clump and feeding at its SE corner. 6:36 she is off S again. A pair of Mallards are in the E inlet, but she goes on S. 6:38 its starting to sprinkle (at aughta snow). ♀ the W ♂ seems to have it in for W/Bl, he now is chasing the latter at G12 → H13. 6:41 - E♀ coming N by way of O20. The Mallards have left, she passed close to the drake but kept going to P23, then in the inlet. Its really starting to rain now. 6:52 the sprinkle has ceased, fog is rising off the lake surface, but it is no warmer. Throughout the rain the E♀ continued to feed along QP23, taking mostly the decomposing cat-tail stems. Now 6:54 she is looping to W of nest clump heading S. Its time for a nest change. She went to P20 before realizing I'm still around and so she turned back, past the nest clump to the W, no she stopped, is fooling around just S of it, now moving across to Q23. The wind is letting up and the Bullfrog just started croaking. Now she "punk-unks" at R23. Once in a charge today I noticed that she can't raise nearly the "ruff" her mate can. In fact it is hardly apparent on her. Now 6:59 she has gone around P23 out of sight. At 7:05 she was feeding at N side of PQ23, its late and time for me to go, and she shows little inclination to climb on the nest, but she is in the nest area now 7:07 - now

W. CULLION
1950

May 2 Lake Temescal, 420 ft., Alameda Co., Calif. - she's out of it. 7:08 - din left.

May 3 Same locality - At 5:40 a.m. ♀ bird incubating nest J6.5. At 5:45 a.m. the ♀ is on nest 922.13 while the ♂ is feeding at 924, and putting as the ♀ Mallard and her brood feed in the 923 area. The Mallards moving S passed thru the nest clump while the E ♂ watched from 923.15. The ♀ on the nest craned her neck to watch the passing brood, but made no aggressive moves against them or even any notes. I assume from her presence on the nest now that she spent the night on it, and took over from the male a few minutes after I left last evening. 5:50 the Mallard and her brood of 10 just came back thru the area and are now feeding at R23. unmolested. 5:52 - the E ♂ is in the nest clump just off the end of the ramp. The ♀ is sitting tight so no replacement yet. 2 ♀ Ruddies were sitting in the open water about 10 feet from the E ♂. They were not threatened, then they moved to 923.12, still the ♂ stayed in the nest clump and still the ♀ sits tight. She seems to be used to the tags now. She is eating more decaying cat-tail material as he works thru the E side of the nest clump. I suspect he is "patrolling" against me but is shy about getting out in the open at 923.18 as he used to do. 6 a.m.

May 3 Jewel Lake, 510 ft., Contra Costa Co., Calif. - At 5:25 p.m. a lone bird swimming in the S pond with its neck outstretched, or more properly, up-stretched and alert. This bird moved out of sight. A moment later a series of "puhks" came out of the S end and continued for about 2 minutes, once being answered by a "cowah" from near D6. The "puhks" seemed to be from G or H 3. 5:34 a neck craneing bird coming out from D6 crossed to F9. Working the cat-tails at the S end I was able to flush only one bird out, a ♂, and he showed no signs of possession, that is he splattered and flew away when he saw me in the cat-tails. Not at all the behavior of a nesting or even territorial bird. 5:50 - a bird over near C12 giving a "cow-ah" note several times. Then as the two N birds began puhking and poonking in defense, he came out of the cat-tails and moved to H18 and on down to K25 where he ~~met~~ met the charging ♀. He started to dabble and brace, but the N male quickly splattered out to drive him to G22. As the N♂ returned tho the S♂ came to J22 and poked around. Once even gave the same defense note being given by the N♂. Eggs #2 & #4 in next M25.19. Neither are very warm nor are either pipped. I doubt if they hatch. No yng heard, but one

Fulica americana

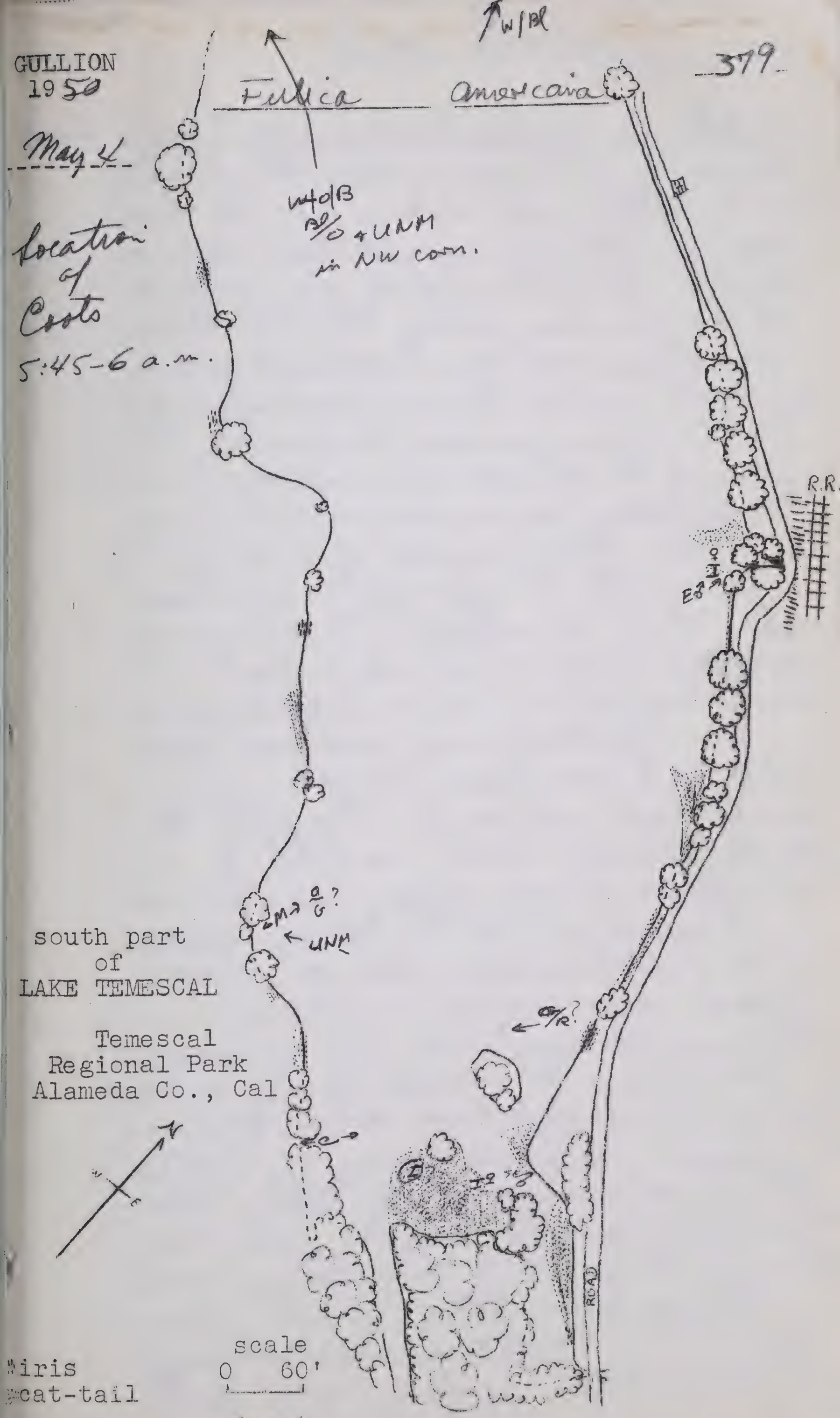
May 3 Jewel Lake, 510 ft., Contra Costa Co., Calif. — seen following the ♂ out into the middle of the lake as he is moving around in defense. The lone bird just gave his "cow-wah," and a moment later jumped a few feet sideways to avoid something in the water. Couldn't tell what. 6:05 p.m. heard 1 yng & saw two others. Now the lonesome ♂ at C13 is giving his "cow-wah" "cow-wah" note! (Calling for a mate?)

May 4 Lake Temescal, 420 ft., Alameda Co., Calif. — At 5:45 a.m. the ♀ is on nest Q22 while the tagged ♂ feeds at Q24. I gave a couple of "punks" to get him to come into view. He came to the nest clump and patrolled it against me, staging in the cat-tails. At 6 a.m. a ♀ is incubating at J6.5. 6:06 p.m. a bird is incubating at J6.5. 6:15 p.m. the E ♂ is on nest Q22, the E ♀ way down towards P16 but responded when I gave a couple of "punks" and swam up to the general vicinity of the nest, then on over to Q23. Now, 6:20 she is moving back S via P20. 6:21 E ♀ splatted from P19 to N17 to attack two W. birds and to drive them out of her area. She particularly assaulted the marked bird of the W pair, even diving behind him for underwater chase. One of the ♀♀ cackled but I couldn't be sure which, think it was the W♀.

GULLION
1950

May 4

location of Coots
5:45-6 a.m.



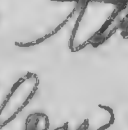
1" = 120'

W. GULLION
1950

Fulica americana 380

May 4 Lake Temescal, 420 ft, Alameda Co., Calif.
Earlier this evening one of the SE birds was at K6 while two Mallards were a few feet away and the tagged Crake was feeding at J6. The hen with all the young was at the E end of the island, but no indication of aggression could be seen. 6:40 - the E♀ coming N, passing nest at O22 and continuing north to finally cut in along N side of cat-tails at PQ23. She passed within about 15 feet of a ♂ Ruddy at O21 and missed a ♂ Mallard at Q20. Now 6:43 she is feeding at Q24. 6:50 p.m. - since about 6:45 w/Bl and another bird have been in a huddle at L16. 6:51 - the E♀ just went S to P16. The tagged E♂ is on the nest facing W. 6:55 p.m. Coots are still feeding on the open water, but mostly near shore. w/Bl at K19 is giving ♀ "poonks" as she moves slowly back and forth. 7:04 p.m. - now she is moving S to K17 and back N. A ♀ "punk-unking" at L20 (the bird on the nest apparently got off, started to swim away in response to that note, got just out of the cat-tails before turning back to the nest.) Checked P16 - a ♀ (E probably was there. The bird on the nest surely is the ♂. I'll have to be here early in the morning.

May 4 Lake Temescal, 420 ft., Alameda Co., Calif. — Cools all time I'm about 7:30 p.m. About the time I could no longer see the lines on this page clearly enough to write on them.

May 5 same locality — At 4:45 a.m. the tagged male is off the nest feeding at ♀23, the bird on the nest then is the ♂. I wonder when the change was made. It is plenty light, can see these lines easily. 5:00 a.m. — a couple of Mallard landed at the mouth of the east inlet, caused ♂/Y at ♀23.13 to "push" and get in a threatening attitude, but he did not get aggressive against them. About 4:40 when I arrived one coot was bathing at L10, 5:17 a.m. E♂ moved to nest clump from ♀23. He is now concealed in the cat-tails on the S side of the nest. About 5:30 he moved back to ♀23 to continue foraging. 5:40 he moved to P21 to patrol against me, then into the nest clump to forage. 6:05 a.m. there seem to be two birds in M area this morning and two in W area. (♀/R) pinned was bowing and billing with a UNM bird. 6:12 a.m. a SE bird chasing a displaying ♂ Ruddy at J8 ignored the ♀. This SE bird off the nest has a shield like this  . It has yellow or yellow orange legs. The UNM in the M area is not banded has greenish legs, a S-SS shield. As at the moment

May 5 Lake Temescal, 420 ft., Alameda Co., Calif. - Carrying a cat-tail leaf at K10.23.- and now gave "punk punk punk-unk" at that position. 6:16 a.m. Shield on this bird is about 35. 6:20 a.m. as I moved N after they gone since 5:50 a.m. I found the ♂ at P16. As I came on to the nest area he more or less followed, finally splattering from P17 to P21 to come into his usual post in patrol. He seems to be regaining his confidence and loosing his fear again I should be able to get a good photograph of the tags on this bird. 6:30 a.m. the ♀ gave a couple of "punk" "punks" as the ♂ feeds close into the nest. 6:38 a.m. a chase and paired display at G/F. the SW ♂ chasing ♀ from fur to S. The W birds mate splattered out from E12 to join him, doing some cackling, then followed by crowing by SW ♂. 6:39 E ♂ still patrolling at ♀21-22. Sun just coming onto P23 - 6:41 a.m. 6:43 E ♂ ceased patrolling against me, move to ♀23.13 to preen, 6:50 - sun first on tops of cat-tails in nest clump. E ♂ still at ♀23.13 preening. 6:54 he is moving S to P21. 6:55 the ♀ on the nest is "pounking" about 5 times, ♂ came back towards nest, but then moved S again. He is moving very intently S, looping out to O19 before cutting back in to P16. Now he is "punking" there. (8 a.m. Daylight

GULLION
1950

May 5 Lake Temescal, 420 ft., Alameda Co., Calif. -
Time whistles are blowing so I am 2 minutes slow 7 a.m. PST). Mors 7:00 am, E ♂ coming back to G 21 to feed on some puffed rice I threw out there. He is coming on up to patrol against me. The last couple of minutes he has been right in SE of the nest clump. 7:15 - quite a paired display at F 11 + E 12. The SW bird seems to be encroaching upon the W area, almost penetrating to the willow at E 12. Most of this display was out from the iris at F 11.3. 7:25 a.m. E ♂ has been constantly in the nest area since 7: a.m. I took a couple of color photos of the flagged ♂. Also earlier one of the W side of the lake S from my position. At about 7:45 (when I moved onto the slope across the road) the ♂ has moved S out of sight. The train passing by just E of this area does not seem to disturb the birds on the lake to any appreciable degree. E ♂ has been at G 23 ~~7:15~~ for a little while didn't see him come in, but now at 8:04 he came out of there and moved to G 21 to feed along the cat-tails. ~~S. to nest~~ S. 8:10 W ♀ chased W/3♂ from F 17 to H 19. The W ♂ belatedly came up to join her as she was returning. W ♂ at now 8:16 charging W/2♂ + U/N M at G 22, he stopped there and is turning S and E. E ♂ still at G 21 - 8:18 a.m.

W. GULLION
1950

Fulica americana

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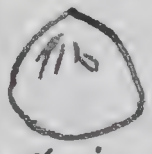
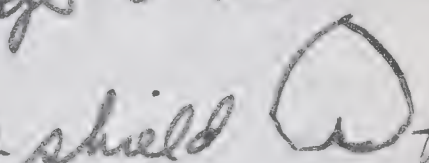
May 5 Lake Temescal, 420 ft., Alameda Co., Calif. - Incidently, about 5:55 a.m. I saw O in the South Bay. He moved N when he saw me and about that time the SE ♂ arrived to chase him into the picnic area, which he crossed at an exceedingly rapid pace. 8:33 E♂ still patrolling so I think I'll leave for a little while 8:44 a.m. a bird that must be the M♀ carried a piece of cat-tail from O13 to K7.4 where she seems to be working on some sort of a platform. A SE bird was in the open area just S, at J7, chasing Mallards, but apparently did not see the ♀. All the while the M♂ (E/R) was at L11-M12. 8:58-M♀ punk-unking at L8 - answered by a couple of "punk-unks" from L6 in the S bay. 8:50 - some "punk-unks" at about P15, could be the E♀, I'll check. 8:51 the M♀ chased some Mallards at K8.6 a moment later a SE bird came out, charging. M♀ went into the charge position but SE bird stayed S of the K8. willow while M♀ stayed N. The SE bird ended up chasing some Mallards towards L6. The E pair changed between 8:33 and 8:50 a.m. Now 9:00 a.m. as the Mallard and her brood of 10 come into the ~~area~~ B22 nest area, the ♂ on the nest gives several punks. Photographed the Mallards a moment before

Fulica americana

May 5 Lake Temescal, 420 ft., Alameda Co., Calif. — Now 9:01 the E♀ moving up from P16 met a pair of Mallards at O18 and found reason to churn about it. Now she is patrolling out from me, and poonking. 9:30 a.m. nest I6.1 very much built up from former size, 10 eggs. all warm. Both parents nearby churning and calling, but not loudly. Nest J6.5 examined at 9:35 a.m. both birds close by. The smaller ♀ has a rounded shield



thus while the larger ♂ has an "incision in his square shield  thus Should make them easy to distinguish. Much to my surprise I found 6 eggs in this nest, all warm. 1 is old #5, but the others are all new. Don't know when they were laid but I note the platform at J6. is quite defunct. New eggs marked A, B, C, D, E. At 9:50 a.m. the tagged E♂ is off the nest, was at O14 but now is moving N at O18 towards the nest area. When I examined the beginning of a structure at K7.4 I frightened the M♀ into the SE area, she was immediately assaulted by the SE ♂ and driven out S of the island to I9. 10:13 a.m. the E♀ is off the nest. When I got opposite the nest at 10:16 a.m. with wading gear on the ♂ also came off the nest.

W. GULLION
1950

May 5 Lake Temescal, 420 ft. Alameda Co., Calif.—
Now 10:19 both birds are off the nest.
Got a picture of the ♀ swimming.
All 7 eggs warm, none pipped,
need to be remarked. 10:30 a.m. (11:30
daylight time) time to go.

May 5 — Jewel Lake, 570 ft. Contra Costa Co., Calif.
At 4:45 p.m. one bird foraging alone
at the S end and one bird head in
cat-tails on S side of the island.
Couldn't call this bird out. Didn't
see any yng but figure they are
probably there. Checked nest
M 25.19 — at least 2 yng swam
away from it as I approached. The
♀ called them from back at P25
and ~~♂~~ after a couple of minutes,
supposedly long enough for the yng
to get to safety there, did she
come out to "poonk" at me. The ♂
came from someplace and also
"pumped", but neither really displayed.
The two eggs were gone, found #1
floating in the water about 3 feet
from the nest off the end of the ramp.
The nest has been revamped, that is,
the cup has been filled with
2-3 inch pieces of dead dried
cat-tail leaves to form a level
platform. It is a layer above the
ramp.

— ~~Lake Temescal, 420 ft. Alameda Co. Calif.~~
5:57 p.m. ○ is in the South Bay.
Head feathers still plastered down.
He moved N into a little clump of

W. GULLION
1950

May 5 Lake Temescal 400 ft, Alameda Co., Calif. — Carex. The SE ♀ coming down apparently routed O. 6:06 p.m. the SE ♂ is on the nest J 6.5, the ♀ is feeding on floating objects (willow seeds or insects?) at J 7. 6:09 p.m. — the E ♀ is a P16, "punking" at me. At the same time she "punkquakes" at me. The 2 W birds are coming directly across from F12 in semi-charge position. They are at about N16, billing and arching. 6:14 p.m. the tagged ♂ is on the nest at G 22. W-O/B seen at D 30 at about 6:20 p.m. W-O/B has moved on down to G 22 by 6:27 p.m. Food in the lake looks to be in top shape. A considerable growth of Potamogeton has become evident during the past couple of days, covered with an abundance of algae. At 6:27 the E ♀ was at P16, but now, 6:31 is moving into G 24. 6:38 p.m. — the SE ♂ is still on the nest. The ♀ was in the South Bay, but I was able to call her out. 6:45 p.m. the SW ♀ is off the nest and sitting at I 7.10. 6:53 p.m. the E ♀ was at P15.9 preening etc, but she soon left moving into the cat-tails at P16. Now 7:01 p.m. the E ♀ is moving S to N13 to feed there. A moment before the M pair routed W/Bl out of K11, chasing her to K14. Now the W ♀, tailed by the ♂ is chasing W/Bl from K14 to